



N7730164

**AN INVESTIGATION TO DETERMINE THE STATIC
PRESSURE DISTRIBUTION OF THE 0.00548 SCALE
SHUTTLE SOLID ROCKET BOOSTER (MSFC MODEL
NUMBER 468) DURING REENTRY IN THE
NASA/MSFC 14 INCH TRISONIC WIND TUNNEL
(SA28F)**

**CHRYSLER CORP.
NEW ORLEANS, LA**

MAY 1977

May 1977

DMS-DR-2244

NASA CR-151,082

AN INVESTIGATION TO DETERMINE THE
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DURING REENTRY IN THE NASA/MSFC 14 INCH
TRISONIC WIND TUNNEL (SA28F)

by

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Prepared under NASA Contract Number NAS9-13247

by

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for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: MSFC TWT 603
NASA Series Number: SA28F
Model Number: MSFC 468
Test Dates: March 17 - April 10, 1975
Occupancy Hours: 126

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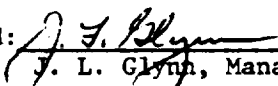
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ABSTRACT

This document presents the results of MSFC TWT 603, a pressure test of a .00548-scale 146 inch Space Shuttle Solid Rocket Booster (SRB) with and without protuberances, conducted in the NASA MSFC 14 x 14 inch Trisonic Wind Tunnel. The objective of this test was to obtain static pressure distributions for the SRB at reentry attitudes and flight conditions. Local longitudinal and ring pressure distributions are presented in tabulated form in the Appendix. Integration of the pressure data has been performed and is available from DATAMAN or NASA/MSFC upon request. Comparisons of the integrated values of the force and moment coefficients can be made with the results from force test TWT 604, Reference 1.

The test was conducted at Mach numbers of 0.40 to 4.45 over an angle of attack range from 60 to 185 degrees. Roll angles of 0, 45, 90 and 315 degrees were investigated. Reynolds numbers per foot varied for selected Mach numbers. The Reynolds number per foot varied from 3.0×10^6 to 5.3×10^6 at Mach 0.40 and from 3.5×10^6 to 8.1×10^6 at

Mach 3.76. The total Reynolds number range tested was from 2.96×10^6 to 8.62×10^6 per foot.

The SRB model configuration was a 0.00548 scale representation of a 146 inch diameter Space Shuttle SRB and included all major protuberances. The model was tested with and without external protuberances. The designation MSFC #468 was assigned to the model and its support hardware.

The test program consisted of 355 runs and required 126 hours to complete. The test was conducted by Northrop Services, Inc., for ED32/Aerodynamics Analysis Branch of NASA-Marshall Space Flight Center. The test was conducted during the months of March and April of 1975. The NASA series number of the test is SA28F.

The photographic coverage of this test consisted of installation photos of the test model and support hardware, along with schlieren photos of selected supersonic test runs.

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NOMENCLATURE

<u>PLOT SYMBOL</u>	<u>MNEMONIC</u>	<u>DEFINITION</u>	<u>UNITS</u>
b_{ref}	BREF	reference span (diameter of the cylindrical section of the model)	in.
C_{A_m}	CA	total axial force coefficient in the missile axis system	
C_{ℓ_m}	CBL	rolling moment coefficient in the missile axis system	
C_{m_m}	CLMM	pitching moment coefficient in the missile axis system	
C_{N_m}	CNM	normal force coefficient in the missile axis system	
C_{N_m}'	DCN/DX	local normal force coefficient in the missile axis system; $\partial C_{N_m} / \partial (X/\ell_{ref})$	
C_{n_m}	CYNM	yawing moment coefficient in the missile axis system	
C_p	CP	pressure coefficient; $(P - P_{\infty}) / q_{\infty}$	
C_{Y_m}	CYM	side force coefficient in the missile axis system	
C_{Y_m}'	DCY/DX	local side force coefficient in the missile axis system; $\partial C_{Y_m} / \partial (X/\ell_{ref})$	
F_N		normal force, positive in the negative direction of Z_m	lb
F_Y		side force, positive in the positive direction of Y_m	lb

NOMENCLATURE (continued)

<u>PLOT SYMBOL</u>	<u>MNEMONIC</u>	<u>DEFINITION</u>	<u>UNITS</u>
l_B	LBODY	overall length of SRB	in.
l_{ref}	LREF	reference length (diameter of the cylindrical section of the model)	in.
M_y		pitching moment; a moment about the Y_m -axis (a positive pitching moment tends to rotate the positive Z_m -axis toward the positive X_m -axis)	in.-lb
M_z		yawing moment; a moment about the Z_m -axis (a positive yawing moment tends to rotate the positive X_m -axis toward the positive Y_m -axis)	in.-lb
MRP	MRP	Moment Reference Point (see "Data Reduction and Presentation" of text)	in.
P		pressure	psi
P_T	PO	free stream total pressure	psi
P_∞	P	free stream static pressure	psi
q_∞	Q(PSI)	free stream dynamic pressure	psi
S_{ref}	SREF	reference area; cross-sectional area of the cylindrical section of the model	in. ²
M	MACH	Mach number	

NOMENCLATURE (continued)

<u>PLOT SYMBOL</u>	<u>MNEMONIC</u>	<u>DEFINITION</u>	<u>UNITS</u>
SRB		abbreviation for solid rocket booster	
T_T		free stream total temperature	°F
X		distance from nose of SRB, positive in the negative X_m direction	in.
X_m, Y_m, Z_m		missile axes (see text)	
XMRP YMRP ZMRP	XMRP YMRP ZMRP	location of the Moment Reference Point, measured from the centerline of the SRB at the nose, parallel to the missile axis system and positive in the negative X_m , positive Y_m and negative Z_m directions	in.
α_T	ALPHA	total angle of attack	deg
β	BETA	angle of sideslip	deg
θ	THETA	circumferential location see Figure 3	deg
ϕ	PHI	roll angle; i.e., angle between the missile Y_m -axis and the body Y-axis (from a pilot's viewpoint in an airplane, a positive roll angle is a clockwise rotation). The plot symbol describes the specific protuberance angular location in degrees, see Figure 1.	deg
RN/Ft	RN/L	Reynolds number per foot	

NOMENCLATURE (Concluded)

<u>PLOT SYMBOL</u>	<u>MNEMONIC</u>	<u>DEFINITION</u>
X/l_B	X/L	ratio of distance from nose to tap divided by length of body
R-SCH	RN-SCH	Reynolds number schedule
Body-Axis System		
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$

SUBSCRIPTS

m	missile axis system
ref	reference conditions
t	total conditions
∞	free stream conditions

INTRODUCTION

After separation of the Solid Rocket Boosters from the Space Shuttle, the SRB will reenter the earth's atmosphere at high angles of attack and at high supersonic Mach numbers. It is desirable that the local pressure distributions and local aerodynamic loads in such an environment be determined. A pressure test of the SRB at reentry attitudes and Mach numbers was conducted to determine local pressure and airload distributions.

The model configuration was a 0.00548-scale representation of a 146 inch diameter Space Shuttle SRB. The SRB model included all major protuberances and was tested with and without protuberances. A drawing of the general arrangement of protuberances is shown in Figure 2.

There were 143 pressure orifices on the model to allow the determination of longitudinal local pressure distributions and circumferential ring pressure distributions, which can be integrated to determine local airload distributions.

Tests were conducted at Mach numbers of .4, .6, .9, 1.2, 1.96, 2.74, 3.48, 3.76 and 4.45 over an angle of attack range from 60 to 185 degrees. The model with all protuberances was tested at roll angles of 0, 45, 90 and 315 degrees.

MODEL DESCRIPTION AND TEST HARDWARE

The model was a 0.00548-scale representation of a 146 inch diameter Space Shuttle Solid Rocket Booster. The general arrangement of the model is shown in Figure 2. The model was designed and fabricated by NASA according to the configuration specified by MSFC drawing 10A00319 and Reference 3. All parts of the model were machined from stainless steel. The model designation number is MSFC #468.

There were 143 pressure orifices located on the model. The location of the pressure orifices is shown in Figure 3 and Table IV. Annealed stainless steel tubing of 0.032 inch O.D. was routed from the pressure orifices out the side of the model (see Figure 4) and connected to 4.5-foot lengths of 0.050 inch O.D. tubing. These tubes were routed along the sting and sting adapter, down the model support mechanism, through the tunnel floor, and out the side of the tunnel. Tygon tubing was used to connect the pressure orifice tubing to quick disconnects which were tubed to scanivalves.

The model was installed in the test facility in a side mount configuration. The center section of the model body has an integral side mount which attaches to a 20-degree offset sting. Model installation photographs showing a low angle of attack mounting and a high angle of attack mounting are presented in Figures 4 and 5.

To allow optimum vertical positioning of the model in the test section, the sting adapter was designed with four vertical positions for sting mounting (see Figures 6 and 7) which, coupled with a 180 degrees sting rotation capability, provided a total of 7 vertical sting adapter positions. The model support sting is rotated to the 180 degree position in the model support mechanism in Figure 7. Horizontal adjustments of the distance from the sting adapter to the sting were provided to allow positioning of the model at the center of rotation of the model support mechanism.

MODEL DESCRIPTION AND TEST HARDWARE (concluded)

The SRB model was tested with and without protuberances. There were six different types of protuberances used on the SRB protuberance model. These were:

1. Data capsule
2. External Tank (ET) attachment structure
3. Electrical tunnel
4. External Tank (ET) attachment ring
5. Aft ring
6. Hold down struts

The SRB nose, body, and engine nozzle are described in the Model Dimensional Data, Table III, and the SRB protuberances are illustrated in the Protuberance Dimension Sheets, Figure 8. Eight equally spaced attachment positions were provided around the model for each protuberance, allowing model roll angles to be simulated in 45-degree increments. By positioning each protuberance at its proper position, model roll angles of 0, 45, 90 and 315 degrees were simulated. Radial protuberance locations for a model roll angle of 0 degrees are shown in Figure 9.

CONFIGURATIONS INVESTIGATED

Three SRB configurations were tested. They are identified as follows:

SRB - All protuberances	SRB with all protuberances.
SRB - "Clean" attach and aft rings	SRB with the only protuberance being a "Clean" attach ring (no projections past the 0.888 inch diameter) (see Figure 8), and an aft ring.
SRB - "Clean" attach ring, no aft ring	SRB with the only protuberance being a "Clean" attach ring.

Each of the above configurations consists of the following model components.

SRB - All protuberances = NBE+DC+ETAS+ELT+ETAR+AR+TDS+CETAR

SRB - "Clean" attach and aft rings = NBE+CETAR+AR

SRB - "Clean" attach ring, no aft ring = NBE+CETAR

Brief descriptions of each component are presented below:

NBE	Nose, body and engine of SRB
DC	Data capsule
ETAS	External Tank attachment structure
ELT	Electrical Tunnel
CETAR	Clean External Tank attachment ring
ETAR	External Tank attachment ring
AR	Aft ring
TDS	Tie down structure

Refer to the Model Dimension Data, Table III, and Figures 2, 8, and 9, for dimensions and locations of protuberances.

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14 x 14 inch Trisonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.00 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50 and the supersonic section permits testing at Mach 2.74 through 5.00. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.46, 1.96 and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increment.

Air is supplied to a 6000-cubic foot storage tank at approximately -40 degrees Fahrenheit dew point and 500 pounds per square inch absolute. The compressor is a three-stage reciprocating unit driven by a 1500 horsepower motor.

The tunnel flow is established and controlled with a servo-actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 200 degrees Fahrenheit. The air then passes through the test section which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20 degrees (± 10 degrees). Sting offsets are available for obtaining various maximum angles of attack up to 90 degrees.

TEST FACILITY DESCRIPTION (concluded)

The variable diffuser section has movable floor and ceiling panels, which are the primary means of controlling the subsonic Mach numbers and permit more efficient running at supersonic Mach numbers. The sector assembly and diffuser telescope to allow easy access to the model and test section.

Tunnel flow is exhausted through an acoustically damped tower to atmosphere or into the vacuum field of 42,000 cubic feet. The vacuum tanks are evacuated by vacuum pumps driven by electric motors rated at a total of 500 horsepower.

Data are recorded by a solid-state digital data acquisition system. The digital data are transferred to punched cards during the run to be reduced later by a computer to proper coefficient form.

Additional information concerning the test facility can be obtained from Reference 2.

INSTRUMENTATION

Eight scanivalves equipped with 50 psia pressure transducers were used to monitor the 143 pressure orifices on the model. The location of these orifices is shown in Figure 3. Tubes from the orifices were tagged and numbered from 1 to 143 according to the relationship between orifice number and model location depicted in Table IV. A strip chart recorder was utilized on initial test runs to monitor pressure levels to selected scanivalves. This was used to insure that sufficient scanivalve response time was being provided in the data acquisition system.

No corrections were made to the model angle of attack due to support hardware deflections under model airloads. The model angle of attack accuracy is within the range of typical force model tests.

TEST PROCEDURE

The configuration SRB - "Clean" attach and aft rings consisted of the SRB with the clean ET attach ring and the aft ring. The configuration is axisymmetric and thus was tested at only one roll position. The configuration was tested at angles of attack from 60 to 185 degrees in increments of 5 or 10 degrees. Pressure data were obtained at Mach numbers of 0.4, 0.6, 0.9, 1.2, 1.96, 2.74, 3.48 and 4.45. Reynolds number variation tests of this configuration were conducted at angles of attack of 70, 90, and 110 degrees at Mach numbers 0.4 and 0.6.

The configuration SRB - "Clean" attach ring and no aft ring was tested to obtain Reynolds number effects. The configuration was tested at an angle of attack range of 60 to 180 degrees in increments of 10, 15, and 20, (in one case 9 degrees) at a Mach number of 3.76, at two Reynolds numbers.

The final configuration tested, SRB-all protuberances, consisted of the SRB with all six different types of protuberances. Pressure data were obtained at an angle of attack range from 70 to 180 degrees in increments of 10 and 20 degrees, and at model roll positions of 0, 45, 90 and 315 degrees. Tests were conducted at Mach numbers of 0.6, 0.9, 1.2, 1.96, 2.74 and 3.48.

A list of average test conditions is given in Table I. The run schedule is presented in Table II.

DATA REDUCTION AND PRESENTATION

The parameters that were measured and recorded during this test are:

- o Wind tunnel conditions (P_∞ , P_T , T_T)
- o Nominal model attitude and support mechanism rotation
- o 143 local pressures

Tunnel conditions were used to calculate the Mach number, the dynamic pressure and the Reynolds number. The nominal model attitude and model support mechanism rotation was used to calculate the model angle of attack.

The pressure data were reduced to coefficient form and are tabulated along with wind tunnel parameters, configuration, and run number in the Appendix of this report. The location of each pressure orifice and the numbering system are presented in Table IV. Special identification of blocked or inoperative pressure orifices are noted in Table IV. Figure 3 presents the orifices as located on the model in reference to the previously mentioned table. The pressure coefficients were integrated to obtain the following missile axis force and moment coefficients:

$C_{N_m}' = \partial C_{N_m} / \partial (X/l_{ref})$	local normal force coefficient
$C_{Y_m}' = \partial C_{Y_m} / \partial (X/l_{ref})$	local side force coefficient
$C_{N_m} = F_N / q_\infty S_{ref}$	normal force coefficient
$C_{Y_m} = F_Y / q_\infty S_{ref}$	side force coefficient
$C_{m_m} = M_Y / q_\infty S_{ref} l_{ref}$	pitching moment coefficient
$C_{n_m} = M_Z / q_\infty S_{ref} l_{ref}$	yawing moment coefficient

DATA REDUCTION AND PRESENTATION (Concluded)

The force and moment coefficients obtained from the integration of the pressure data are available from MSFC and DATAMAN for comparison with the results from the force test, TWT 604 (Reference 1). Model reference dimensions used in the data reduction are presented in Table V.

The integration force and moment coefficients were calculated in the missile axis system. A schematic of this axis system is presented in Figure 1. The missile axis system (X_m , Y_m , Z_m) is a non-rolling body axis system that is frequently used in wind tunnel tests and studies of missile flight dynamics. It is a system of axes that rotates with a missile or wind tunnel model through angles of sideslip and angles of attack but never through angles of roll; i.e., it never rotates about the missile or model longitudinal axis. The missile axis system is identical with the body axis system at zero roll angle.

The Moment Reference Point (MRP) is taken to be the SRB's burn out center of gravity and its location is measured from the nose of the SRB along the centerline. For the full scale SRB, the center of gravity is located at $X = 1044$ inches. Thus, the MRP for the 0.00548 scale SRB model is 5.721 inches from the model nose, on the centerline (refer to Figure 2).

REFERENCES

1. NASA CR 141, 549, DMS-DR-2223 "Reentry Static Stability Characteristics of a 0.005479 Scale Model 146 Inch Solid Rocket Booster tested in the MSFC 14 x 14 Inch TWT (SA8F)," Johnson, J. D., Praharaj, S. C., Braddock, W. F.; July 1975.
2. NASA TMX-64624, "The George C. Marshall Space Flight Center's 14 x 14 Inch Trisonic Wind Tunnel Technical Handbook," Simon, Erwin; November 1971.
3. Horton, W. P., "SRB Baseline" MSFC Memo S&E-SRR (74-193), June 6, 1974.

REFERENCE DRAWINGS

1. 10A00319, 6-13-74; SRB External Contour; Marshall Space Flight Center.

Table 1.

M-9230-75-416

TEST: TWT-603		DATE: MARCH AND APRIL 1975		
TEST CONDITIONS				
MACH NUMBER	REYNOLDS NUMBER (per foot)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)	STAGNATION PRESSURE (pounds/sq. inch)
0.40	2.96x10 ⁶ 1/FT.	1.81	100	18
↓	5.27x10 ⁶	3.21	100	32
0.60	4.09x10 ⁶	3.56	100	18
↓	8.62x10 ⁶	7.51	100	38
0.90	6.27x10 ⁶	7.37	100	22
1.20	6.68x10 ⁶	9.15	100	22
1.96	7.57x10 ⁶	10.97	100	30
2.74	5.20x10 ⁶	6.37	100	30
3.48	7.12x10 ⁶	6.86	100	60
3.76	3.52x10 ⁶	3.07	100	34
↓	8.17x10 ⁶	7.13	100	79
4.45	6.03x10 ⁶	4.08	100	80

BALANCE UTILIZED: N/A

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	_____	_____	_____
SF	_____	_____	_____
AF	_____	_____	_____
PM	_____	_____	_____
RM	_____	_____	_____
YM	_____	_____	_____

COMMENTS:

Table II.

TEST : MSFC TWT-603(SA28F)			DATA SET / RUN NUMBER COLLATION SUMMARY										DATE : MARCH AND APRIL 1975																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
DATA SET IDENTIFIER	CONFIGURATION	SCMD. PARAMETERS/VALUES		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										TEST RUN NUMBERS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
		α	β		R-Sch	ϕ	0.4	0.6	0.9	1.2	1.96	2.74	3.48	3.76	4.45																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

MSFC - Form 163-3 (Rev. May 1973) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER
AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Continued)

TEST : MSFC TWT-603(SA28F)										DATE : MARCH AND APRIL 1975										
DATA SET / RUN NUMBER COLLATION SUMMARY																				
DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)															
		α	β		R	S	ϕ	0.4	0.6	0.9	1.2	1.96	2.74	3.48	3.96	4.45				
R11019	SRB - "CLEAN"	160	0	2	0						100	99	98	97	76	33	34		35	
20	ATTACH AND AFT RINGS	160									93	89	85	81	77	29	25		21	
21		170												81/1						
22		170												82	78	30	26		22	
23		175												82/1						
24		175												83	79	31	27		23	
25		180												83/1						
26		180												84	80	32	28		24	
27		185												84/1						
28		185		1																
29	SRB - "CLEAN"	60		1														1		
30	ATTACH RING	60		2														3		
31	NO AFT RING	75		1														2		
32		75		2														4		
33		90		1														6		
34		90		2														5		
35		105		1														7		
36		105		2														9		
1		7		13		19		25		31		37		43		49		55		
																		61		
																		67		
																		75.76		
		α OR β		SCHEDULES														IDVAR (1)	IDVAR (2)	NDV

MSFC Form 363-3 (Rev. May 1973) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Continued)

[illegible]

MSFC Form 260-1 (Rev. May 1972)

R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER

AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Continued)

TEST : MSFC IWT-603(SA28F)				DATA SET: RUN NUMBER COLLATION SUMMARY										DATE : MARCH AND APRIL 1975																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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		α	β	R	S		0.6	0.9	1.2	1.96	2.77	3.48																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

MSFC Form 103-1 (Rev. May 1973) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Continued)

TEST: MSFC TWT-603(SA28F)										DATE: MARCH AND APRIL 1975										
DATA SET RUN NUMBER COLLATION SUMMARY																				
DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)															
		α	β		0.6	0.9	1.2	1.96	2.74	3.40	TEST RUN NUMBERS									
R11070	SRB - ALL	170	0	2	45				175	173	171	290	292	294						
71	PROTUBERANCES	170		2	45				176	174	172	291	293	295						
72		70		1	90				196											
73		70		2					195	197	198	294	265	264						
74		90		1					201											
75		90		2					202	200	199	283	266	267						
76		110		1					204											
77		110		2					203	205	206	292	269	268						
78		130		2					211	209	207	280	270	272						
79		150		2					212	210	208	281	271	273						
80		170		2					213	215	217	278	276	274						
81		180		2					214	216	218	279	277	275						
82		70		1	315				241											
83		70		2					242	240	239	293	262	263						
84		70		2						240										
85		90		1					236											
86		90		2					235	237	238	344	261	260						
87		110		1					233											
		7	13	19	25	31	37	43	49	55	61	67	75	76						
		IDVAR (1) IDVAR (2) NDV																		
		α OR β SCHEDULES																		

MSFC - Form 363-3 (Rev. May 1973) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Concluded)

[illegible]

1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

NORTHROP SERVICES, INC.

Table III.
MODEL DIMENSIONAL DATA

MODEL COMPONENT: NOSE

GENERAL DESCRIPTION: 146-INCH SRB NOSE, CONE ANGLE OF 18° WITH A SPHERICAL
RADIUS NOSE CAP.

DRAWING NUMBER: 80M42712DIMENSIONS:FULL-SCALEMODEL SCALE

Length

195.00 in.1.068 in.

Max, Width

146 in.0.800 in.

Max. Depth

146 in.0.800 in.

Fineness Ratio

Area

Max. Cross-Sectional

116.26 ft.²0.503 in.²

Planform

Wetted

Base

Table III. (Continued)

MODEL COMPONENT: BODYGENERAL DESCRIPTION: 146-INCH DIAMETER SRB BODY80M42712
80M42711
DRAWING NUMBER: 80M51373

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1438.7 in.</u>	<u>7.884 in.</u>
Max. Width	<u>146 in.</u>	<u>0.800 in.</u>
Max. Depth	<u>146 in.</u>	<u>0.800 in.</u>
Fineness Ratio	<u> </u>	<u> </u>
Area		
Max. Cross-Sectional	<u>116.26 ft.²</u>	<u>0.503 in.²</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

Table III. (Concluded)

MODEL COMPONENT: ENGINE SHROUD/NOZZLEGENERAL DESCRIPTION: 142-INCH DIAMETER SRB ENGINE SHROUD/NOZZLE COMBINATIONDRAWING NUMBER: 80M51373

<u>DIMENSIONS:</u>	<u>THEORETICAL</u>	
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Engine Shroud		
Flare Angle	<u>18° 47'</u>	<u>18° 47'</u>
Length	<u>91.5 in.</u>	<u>.501 in.</u>
Max. Dia.	<u>208.2 in.</u>	<u>1.141 in.</u>
Base Area	<u>236.42 ft.²</u>	<u>1.022 in.²</u>
Engine Nozzle		
Length	<u>N/A</u>	<u>.353 in.</u>
Max. Dia.	<u>147.644 in.</u>	<u>0.809 in.</u>
Base Area	<u>118.893 ft.²</u>	<u>0.514 in.²</u>

Table IV. CORRELATION BETWEEN TUBE/ORIFICE NUMBER AND ORIFICE LOCATION ON MODEL

RADIAL LOCATION RADIAL ROW LONGITUDINAL STA. LONG. STA. X X/2 B	0° 22 1/2° 45° 67 1/2° 90° 112 1/2° 135° 157 1/2° 180° 225° 270° 315°															
	A	B	C	D	E	F	G	H	I	J	K	L				
.027 0.262	1		30		52		82		104							
.050 0.489	2		31		53		83		105							
.074 0.725	3		32		54		84		106							
.098 0.961	4		33		55		85		107							
.111 1.084	5	21	34	43	56	73	86	95	108	125	128	141				
.139 1.360	6	22	35	44	57	74	87	96	109	126	129	142				
.168 1.650	7	23	36	45	58	75	88	97	110	127	130	143				
.191 1.871	8	24		46	59	76		98	111		131					
.255 2.500	9		37		60		89		112							
.344 3.373	10	25		47	61	77		99	113		132					
.392 3.840	11				62				114		133					
.667 6.541	12	11	38		63		90		115		134					
.702 6.883	13	26		48	64	78		100	116		135					
.724 7.099	14	27		49	65	79		101	117		136					
.744 7.294	15	28		50	66	80		102	118		137					
.755 7.402	16	29		51	67	81		103	119		138					
.869 8.519	17		39		68		91		120							
.902 8.844	18		40		69		92		121							
.923 9.055	19		41		70		93		122		139					
.945 9.263	20		42		71		94		123		140					
.982 9.630	21	20		72					124							

PRESSURE PORTS COVERED BY PROTUBERANCES

MODEL	PRESSURE PORT NUMBERS
ROLL POSITION	
0°	58 through 69, 129
45°	88 through 92, 142
90°	110 through 121, 6
315°	36 through 40, 126
BLOCKED OR LEAKING PORTS - 11, 17, 29, 136	

NORTHROP SERVICES, INC.

Table V. 0.00548-SCALE 146-INCH DIAMETER SRB REFERENCE DIMENSIONS

DIMENSION	FULL SCALE	MODEL SCALE
Reference Area, S_{ref} (cross sectional area of cylindrical body)	116.26 ft ²	0.503 in. ²
Reference Length, l_{ref} (diameter of cylindrical body)	146 in.	0.800 in.
Reference Span, b_{ref} (diameter of cylindrical body)	146 in.	0.800 in.
Moment Reference Point, MRP (burn out c.g.)		
XMRP (from nose)	1044 in.	5.721 in.
YMRP (from center line)	0	0
ZMRP (from center line)	0	0

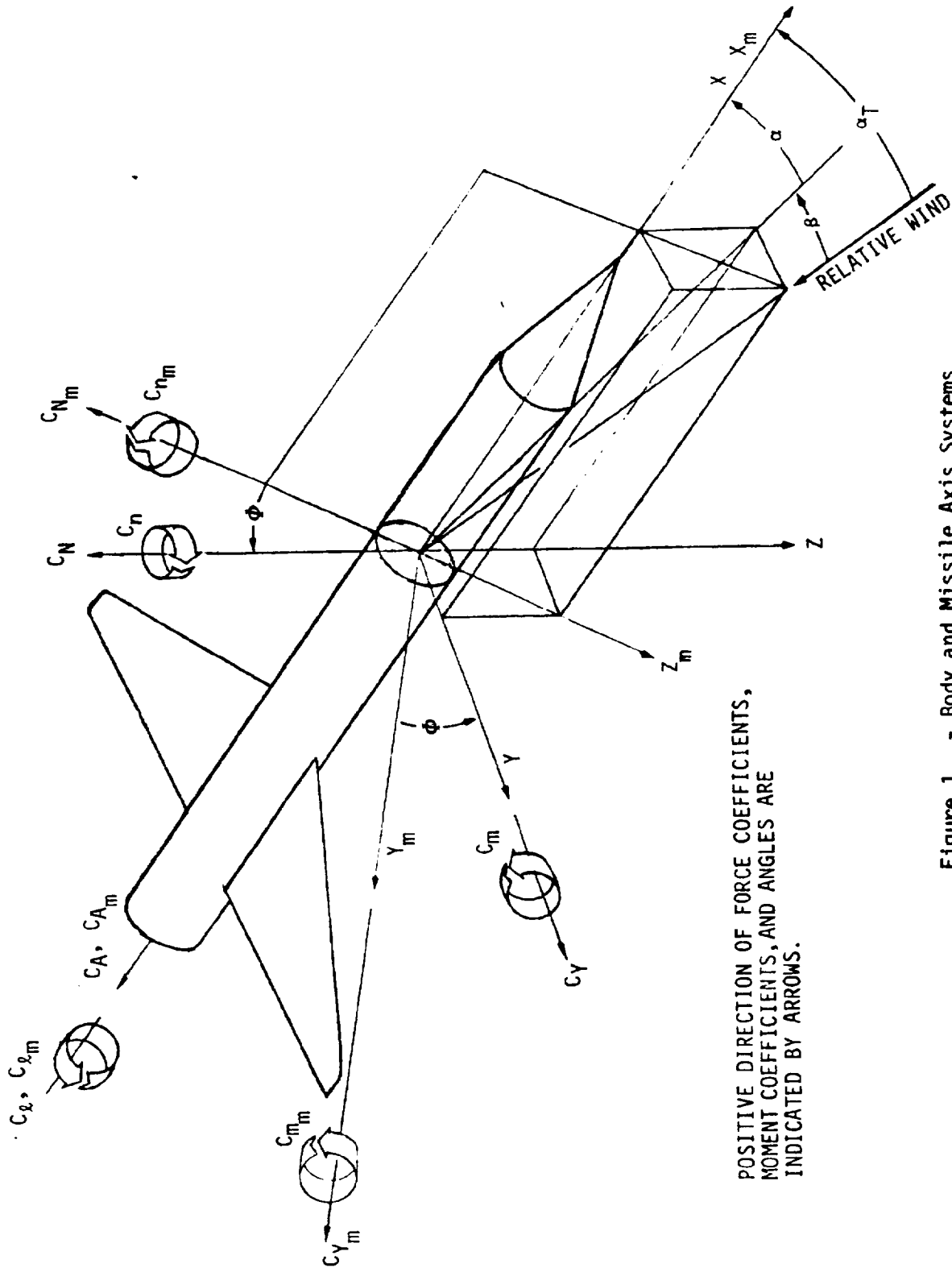


Figure 1. - Body and Missile Axis Systems

NORTHROP SERVICES, INC.

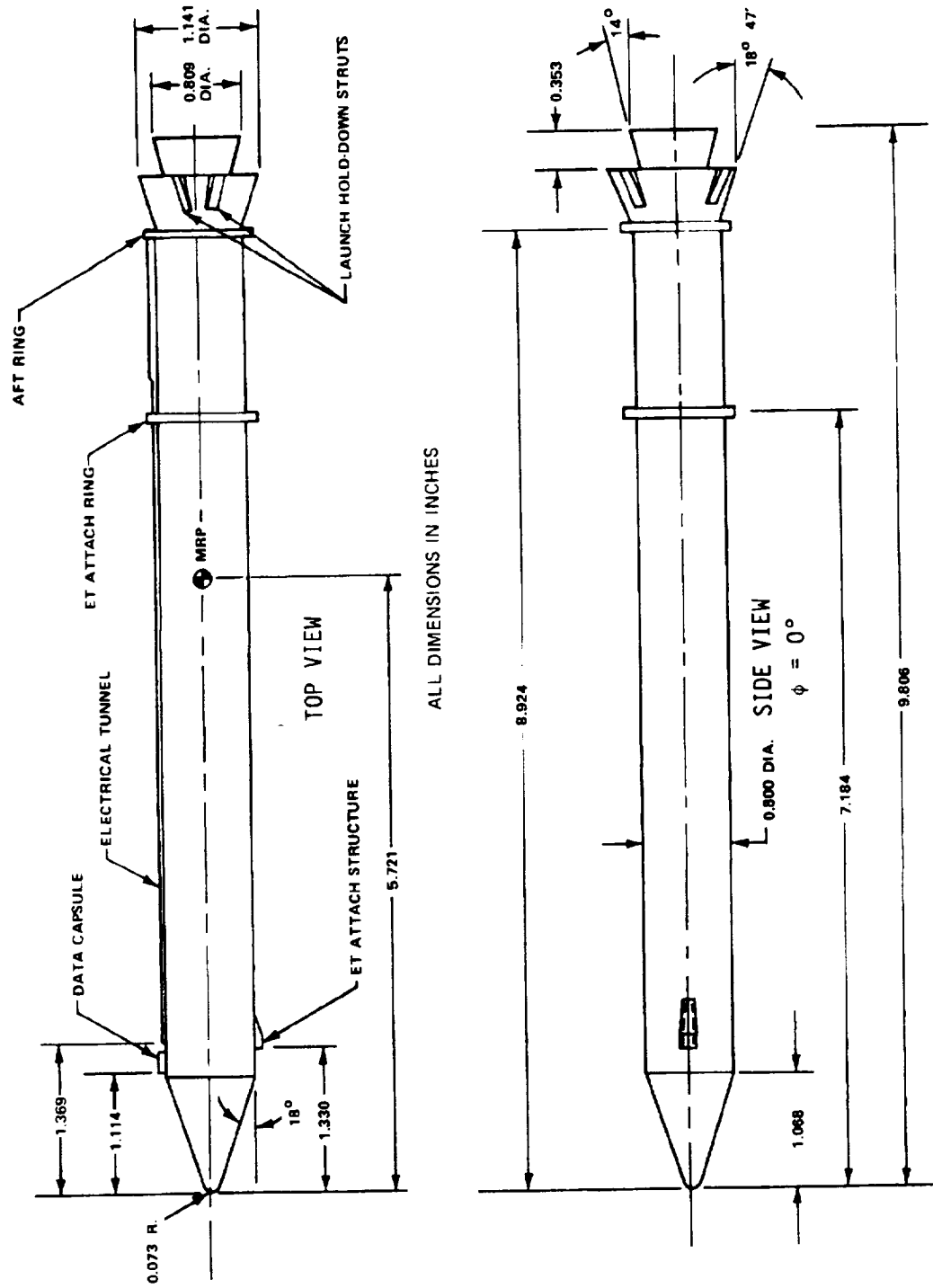


Figure 2. GENERAL ARRANGEMENT OF SRB



Figure 2. (Concluded)

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9.452
9.805
7.183
0.733

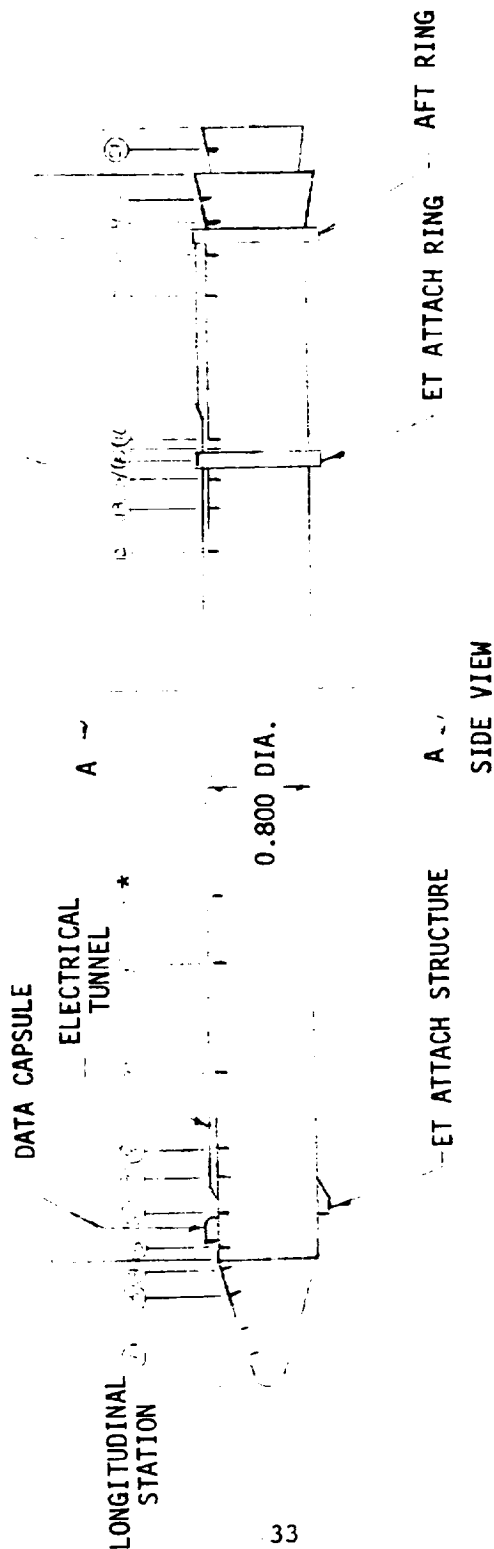
601.0

X/°B 0.0

1.068

0.0

X

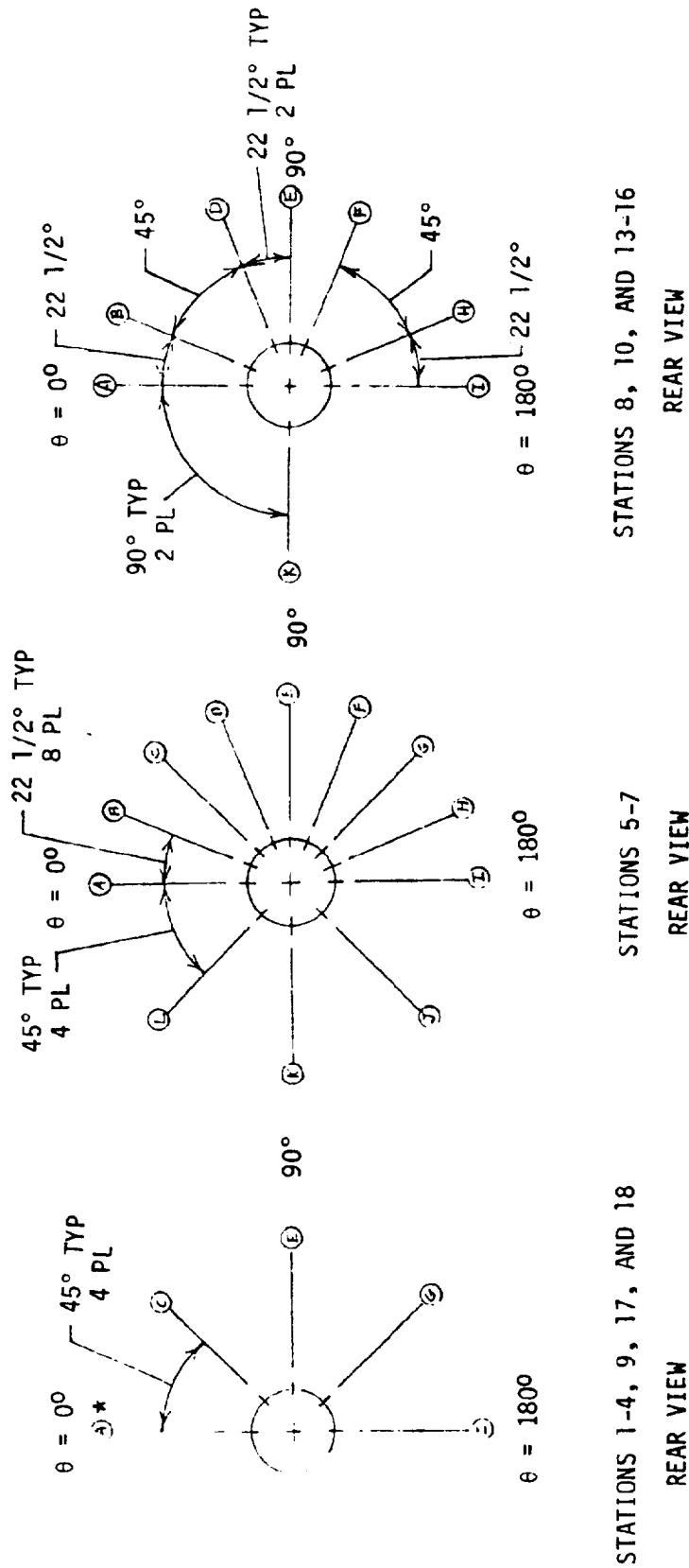


PROTUBERANCE LOCATIONS SHOWN FOR CLARITY

"LONGITUDINAL STATION"

* Numbers refer to listing in Table IV

Figure 3. PRESSURE ORIFICE LOCATIONS



* Letters refer to "Radial Row" in Table IV

SECTIONS A-A

Figure 3. (Continued)

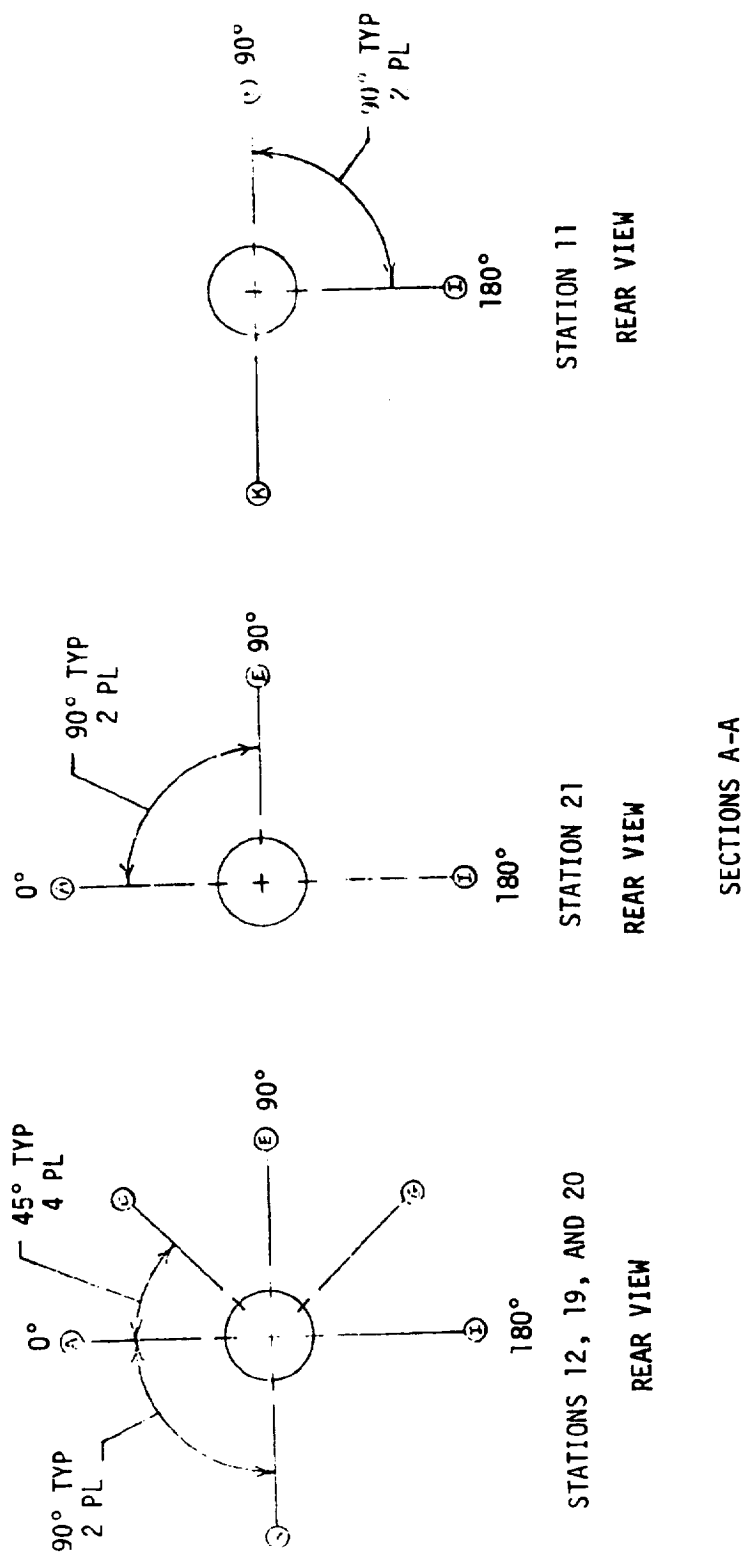


Figure 3. (Concluded)

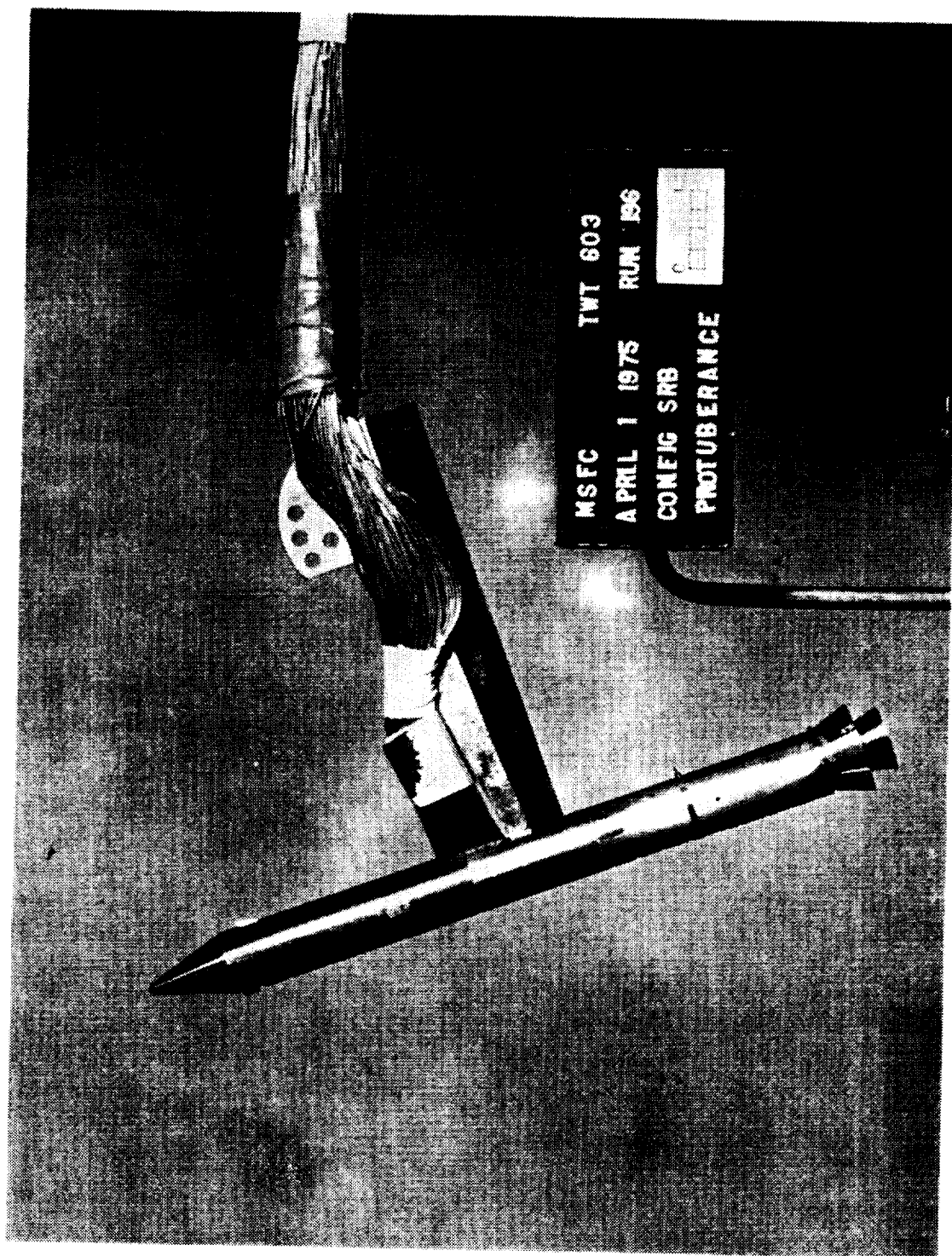


Figure 4. SRB MODEL, WITH PROTUBERANCES, AT LOWEST ANGLE OF ATTACK STING CONFIGURATION (SHOWN AT $\alpha = 70^\circ$)

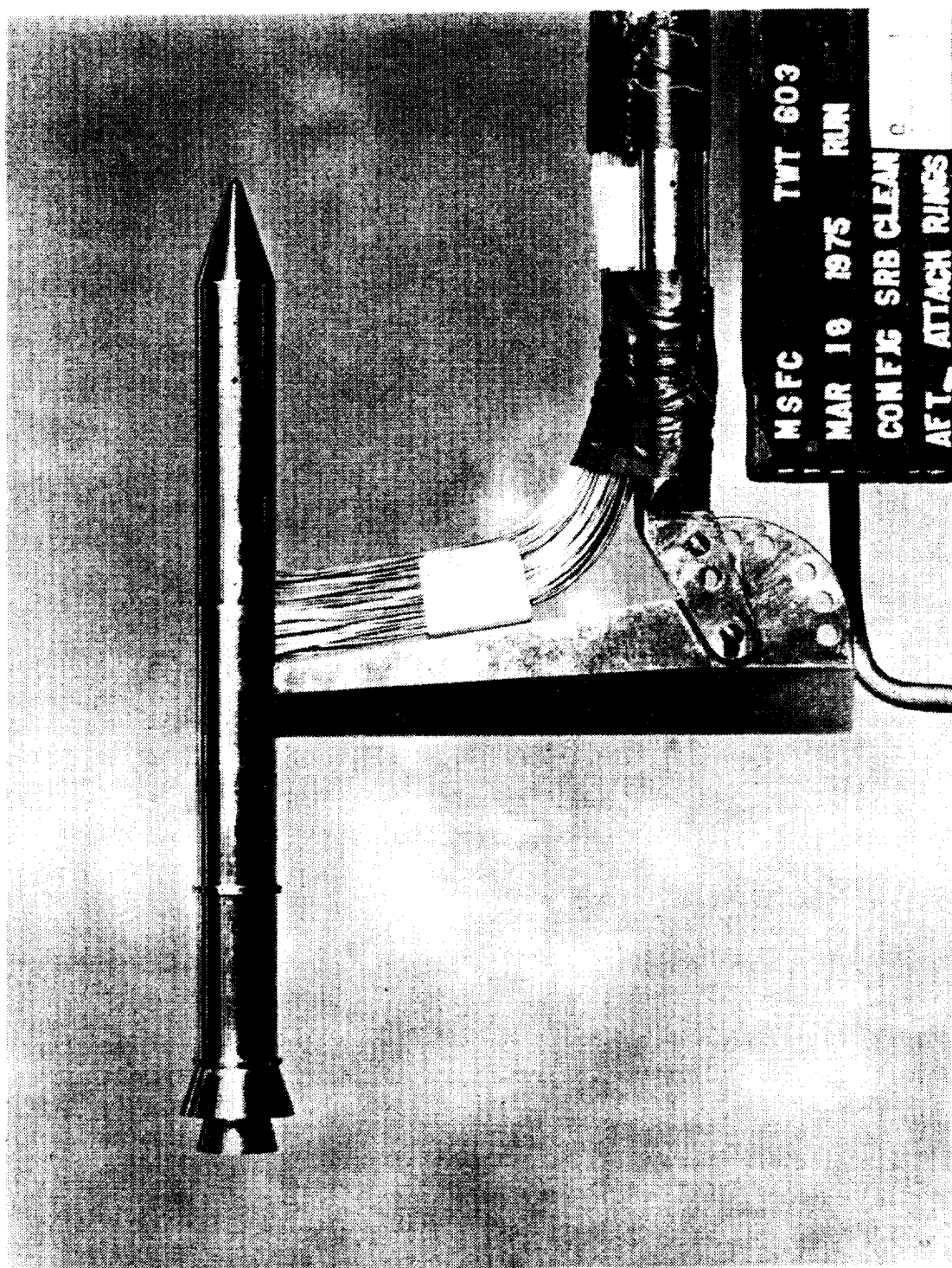


Figure 5. SRB MODEL, CLEAN CONFIGURATION, AT HIGHEST ANGLE OF
ATTACK STING CONFIGURATION (SHOWN AT $\alpha = 180^\circ$)

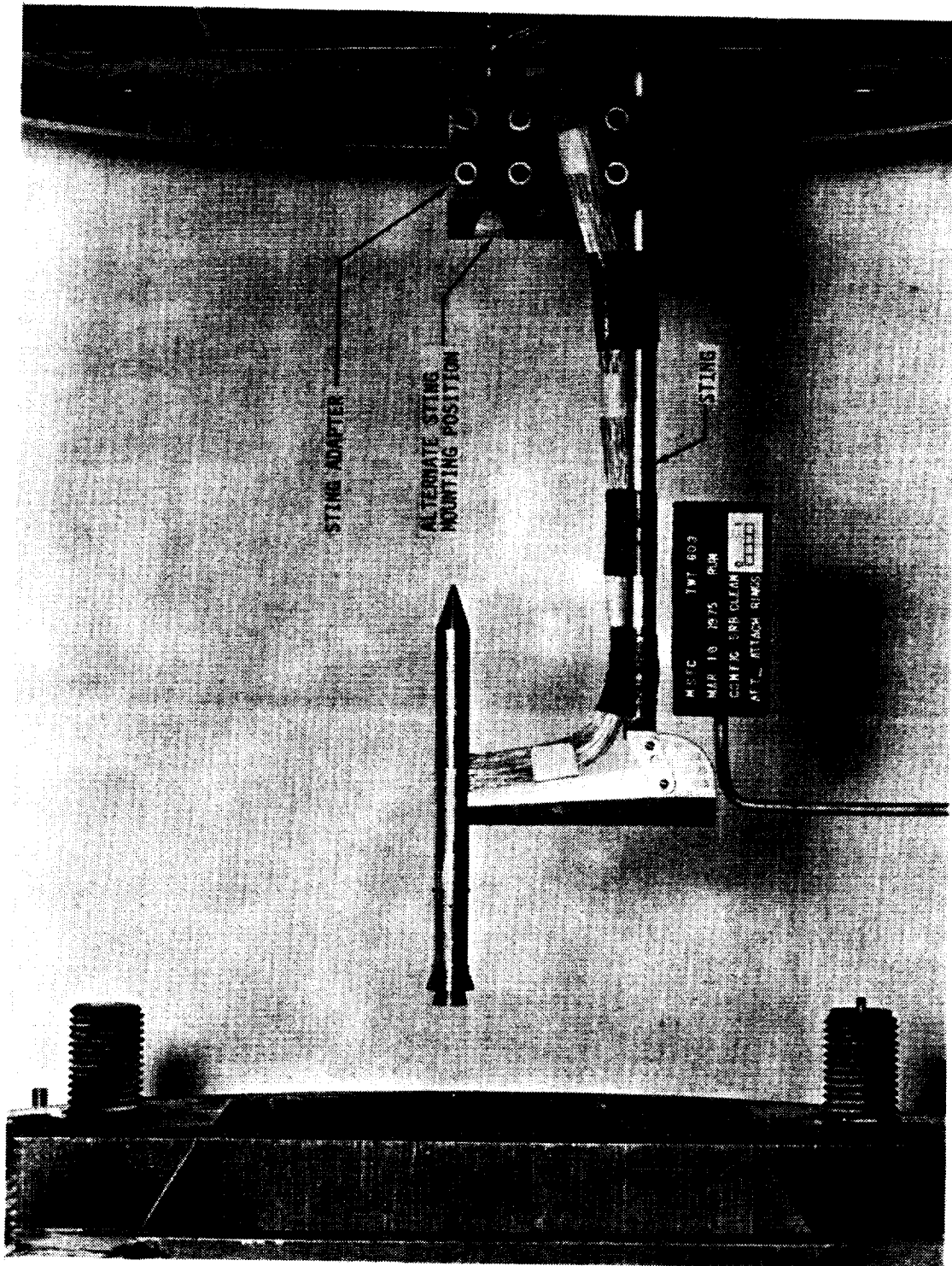


Figure 6. SRB MODEL STING ARRANGEMENT AND POSITIONING

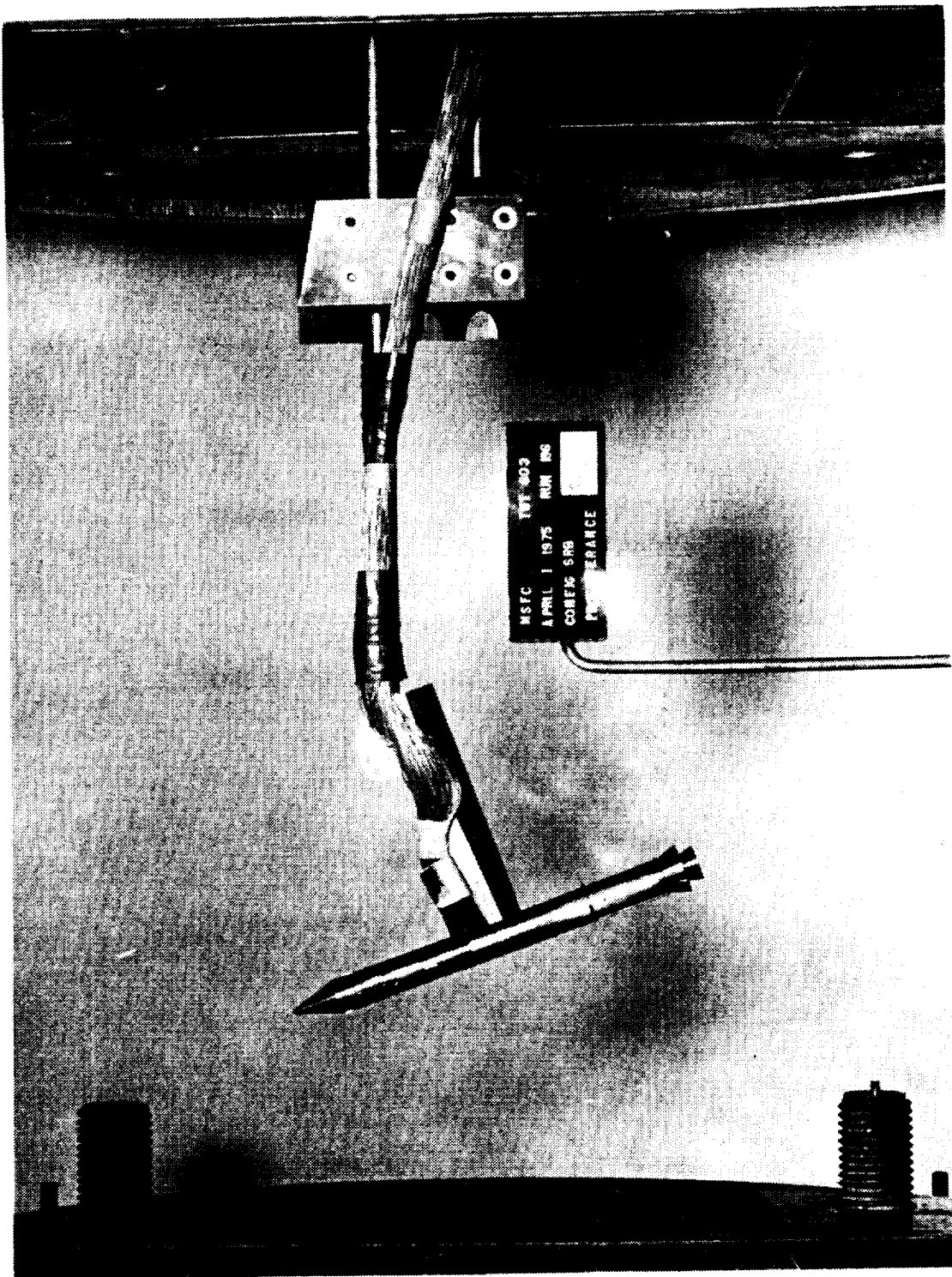
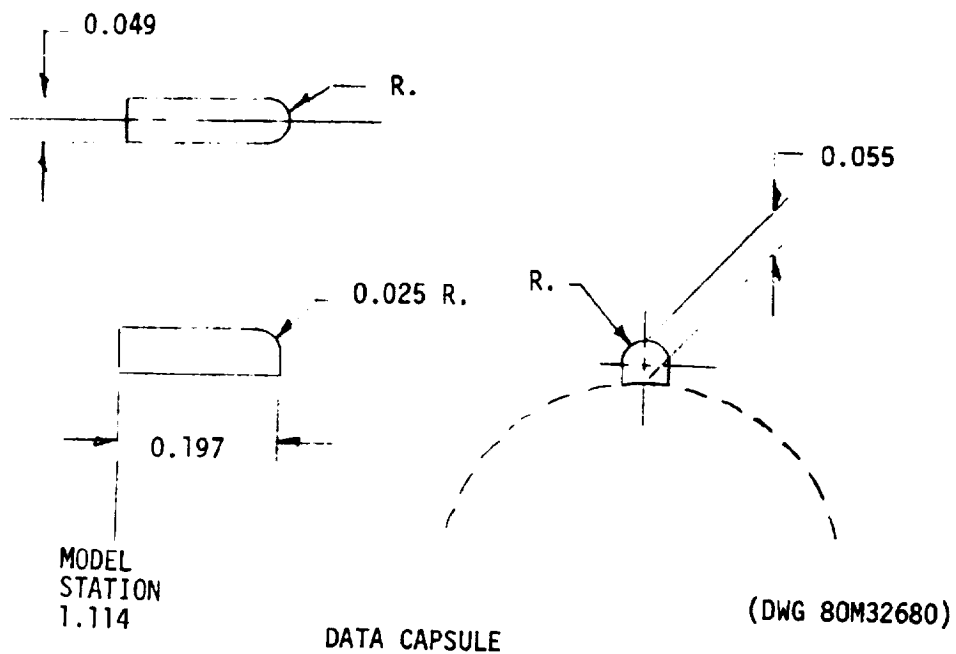


Figure 7. STING ADAPTER ROTATION AND MODEL POSITIONING



ALL DIMENSIONS IN INCHES

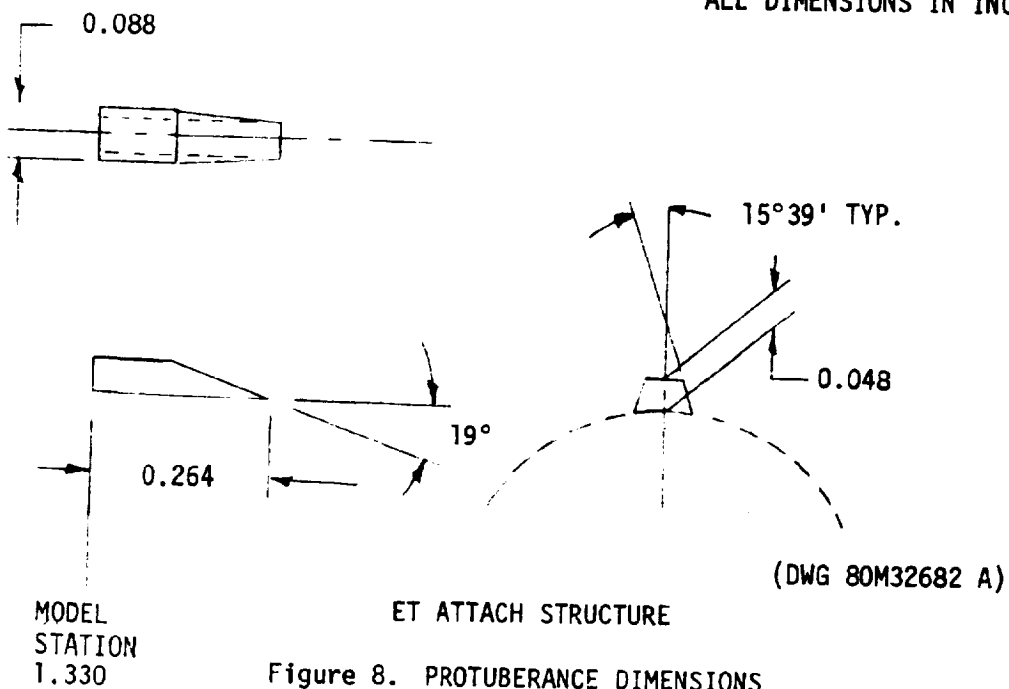
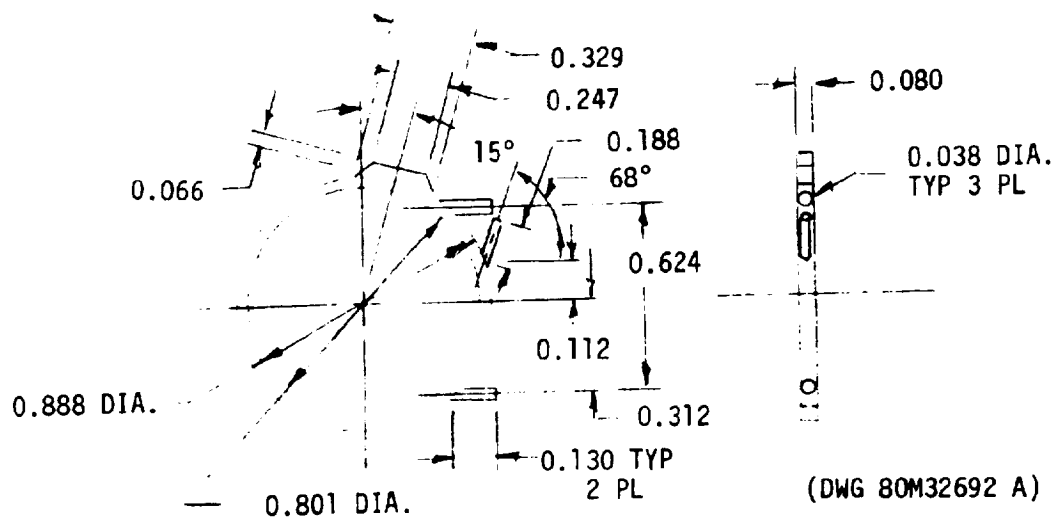
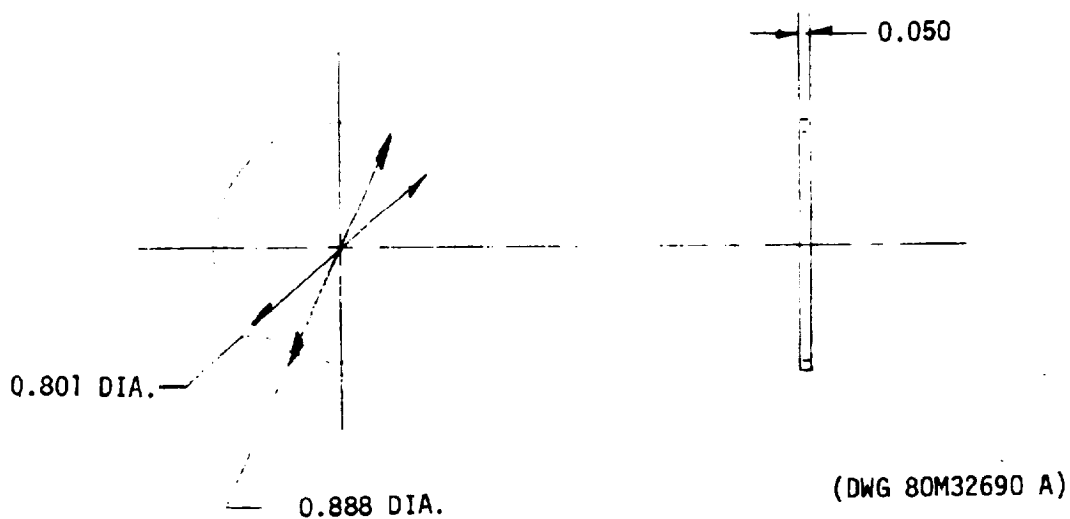


Figure 8. PROTUBERANCE DIMENSIONS



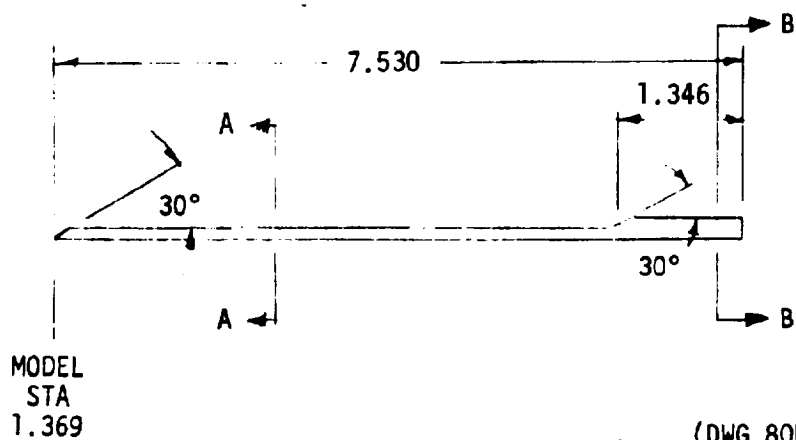
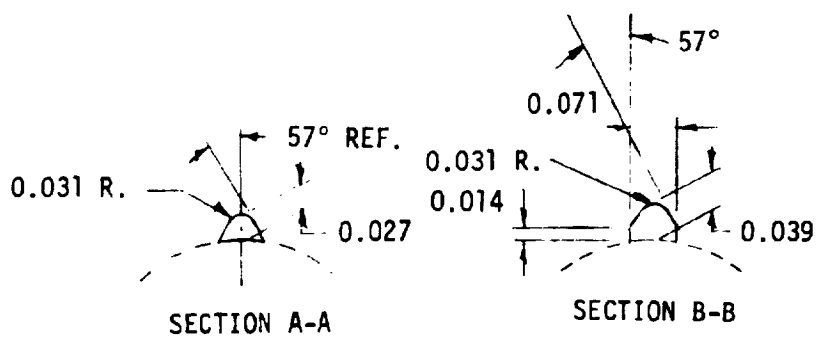
ET ATTACH RING

ALL DIMENSIONS IN INCHES



AFT RING

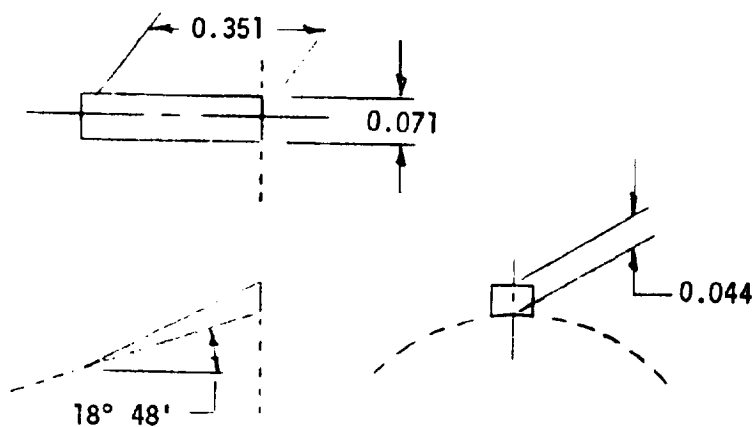
Figure 8. (Continued)



(DWG 80M32689A)

ELECTRICAL TUNNEL

ALL DIMENSIONS IN INCHES



(DWG 80M32691A)

LAUNCH HOLD-DOWN STRUTS

Figure 8.(Concluded)

NORTHROP SERVICES, INC.

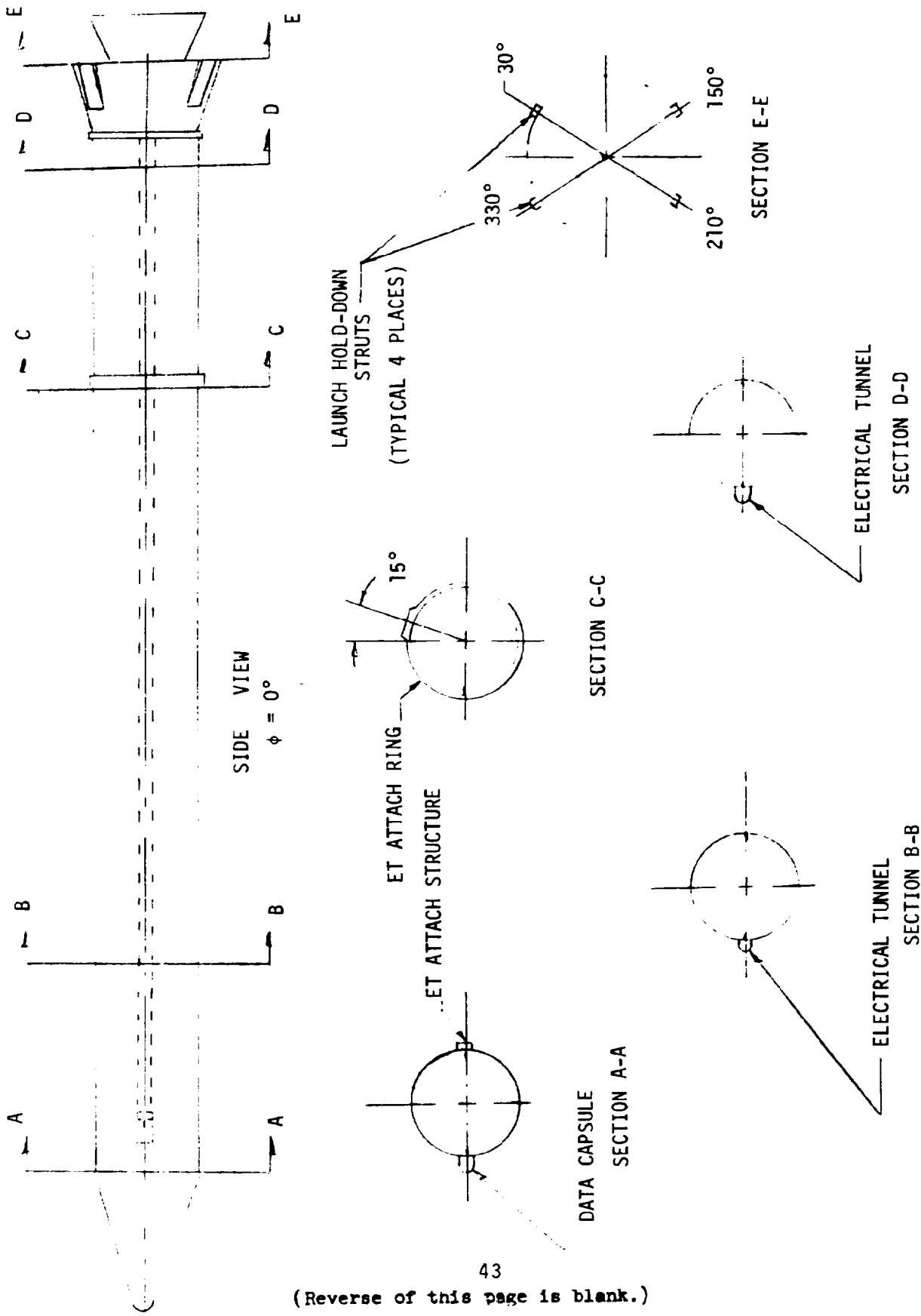


Figure 9. PROTUBERANCE RADIAL LOCATIONS

APPENDIX
TABULATED SOURCE DATA

Note: The value of 999.999 is incorporated into the source data to indicate where data do not exist or where data are questionable.

Tabulations of plotted data are available on request from Data Management Services.

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3215 - .2201
3515 - .3627

2840	- .6150
3109	
1362	- 1704

6666

3614 - 3518
1151 - 1256

4673 - .4594
3212999.99399
4554

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SRB

0000 22.5000 4:

0135
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4305
3728

8618 -1.3088
5343 - .5424

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 2

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11001)

MACH (2) = .596 ALPHA (1) = 60.100

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.2422	-.2343	-.3284	-1.1061	-1.3157	.4992	.8379	-.6131
	.392				-.7145			.8314	-.7197
	.667	.999	.9999	-.5489	-1.5727	-.4092		.7988	-1.3474
	.702	-.4404	-.5151	-.4858	-1.4467	-1.4543	.4802	.8276	-1.3711
	.724	-.2321	-.3081	-.5359	-.8165	-1.3277	.6538	.9971	.999
	.744	-.5442	-.5530	-.7034	-.8562	-1.2723	.6977	1.0490	-.9997
	.755	-.4105	.999	-.6223	-1.4153	-1.3343	.4963	.8467	-1.5120
	.869	-.5142		-.4166	-1.5569	-.3822		.8489	
	.902	.999	.9999	-.3393	-1.0381	-.3437		1.0183	
	.923	-.3797		-.5422	-1.0566	-.2406		1.0301	-1.1863
	.945	-.3916		-.4051	-1.1376	-.1918		.8939	-1.2229
	.982	-.4066			-.6971		-.4950		

MACH (3) = .904 ALPHA (1) = 60.100 QIPSF = 7.4200 PO = 22.010 P = 12.950 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-1.2111	-1.2104	-1.1235	-.3539			1.2285	
	.050	-1.0636	-1.1794	-1.0981	.3586			1.2387	
	.074	-.9212	-1.0890	-1.0781	.3512			1.2318	
	.098	-.8289	-.9801	-1.0089	.3438			1.2009	
	.111	-1.0681	-1.0340	-.9134	-.2533	.8430		1.0575	
	.139	-.8285	-.8609	-.8391	-.7986	.8041		1.0427	-.9148
	.168	-.7387	-.7671	-.7677	-.8207	.1957		1.0112	-.8452
	.191	-.6792	-.6981	-.6908	-.6064	.1467		.9932	-.7682
	.255	-.5404	-.5593	-.6098	-.6224	.7478		.9640	-.7016
	.344	-.3703	-.3830	-.4021	-.5639	.6923		.9404	-.4046
	.392			-.3485				.9336	-.3527
	.667	.999	.9999	-.6978	-.9167	.0346		.8976	-.8526
	.702	-.6327	-.7082	-.6749	-.7144	-.6934		.9225	-.7116
	.724	-.4296	-.5039	-.5861	-.6381	-.5956		1.1105	.999
	.744	-.6996	-.6993	-.7385	-.8946	-.8136		.8614	-.9457
	.755	-.5923	.999	-.8474	-.8798	-.7082		.6947	-.9037
	.869	-.4805		-.4931	-.5450	.0611		.9353	
	.902	.999	.9999	-.4222	-.4926	.1391		1.1392	
	.923	-.4073		-.4357	-.6347	.1825		1.1658	-.7056
	.945	-.3957		-.4080	-.6030	.0990		.9351	-.5430
	.982	-.4021			-.4350			-.5478	

STABULATED SOURCE DATA, MSFC TWT 503 (SA28F)

WSSC TWT 603 (EA28E) SBB - CLEAN ATTACH AFT RING (R11001)

[illegible]

DEPENDENT VARIABLE CP

BAS (1) NO 11335

0000 33 5000 45 0000 67 5000 80 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

7/8

0.27	- .6473	- .8181	- .5176	.6802	1.4010
0.50	- .6095	- .7836	- .4950	.6794	1.4081
0.74	- .6064	- .7674	- .4886	.6637	1.4039
0.98	- .5768	- .7447	- .4898	.6533	1.3739
1.11	- .7155	- .7529	- .5141	.5636	.2429
1.39	- .5718	- .7242	- .5511	.5206	1.2214
1.68	- .5323	- .6065	- .5781	.4809	1.1838
1.91	- .5212	- .5585	- .5156	.4413	1.1712
2.55	- .4390	- .4407	- .4106	.4272	1.1395
3.44	- .3143	- .3179	- .3173	.3891	1.1210
3.92	999.9999	- .5734	- .5600	.3891	1.1146
6.67	- .4849	- .5070	- .4509	.1851	1.1003
7.02	- .3698	- .3974	- .3788	.0963	1.237
7.24	- .4974	- .4938	- .6915	1.2999	1.0950
7.44	- .4674	999.9999	- .6860	1.1695	1.1695
7.95	- .4173	- .4360	- .6333	.1838	1.1600
8.69	999.9999	- .3919	- .4308	.4301	1.3998
9.02	- .3055	- .4020	- .4577	.5073	1.3205
9.23	- .3704	- .3958	- .4745	.5411	1.3522
9.45	- .3815	- .3958	- .3929	.4498	1.322
9.82			- .5296		- .0271

AN/L	P	BO	AN/L	P	BO
7.3003	4.0700	30.010	7.3003	4.0700	30.010

SECTION 1101.335

DEPENDENT VARIABLE CP

0000 33 5000 45 0000 67 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

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TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

PAGE 4

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11001)

MACH (5) = 1.962 ALPHA (1) = 60.100

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L
 .869 -.2404
 .902 999.9999
 .923 -.2342
 .945 -.2535
 .982 -.2423

-.1228
 .7437
 .9423
 .8821
 .8824
 -.0856

1.3725
 1.7442
 1.8728
 1.5671
 -.0856

MACH (5) = 2.740 ALPHA (1) = 60.100 Q1PSF = 6.3800 PO = 30.040 P = 1.2100 RN/L = 5.0000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L
 .027 -.0756
 .050 -.0798
 .074 -.0810
 .098 -.0853
 .111 -.0956
 .139 -.0919
 .160 -.0907
 .191 -.0907
 .255 -.0895
 .344 -.0913
 .392 -.0926
 .667 999.9999
 .702 -.1114
 .724 -.1120
 .744 -.1230
 .755 -.1247
 .869 -.1144
 .902 999.9999
 .923 -.1144
 .945 -.1126
 .982 -.1102

-.1004
 -.0998
 -.1017
 -.0992
 -.1010
 -.0956
 -.0962
 -.0951
 -.0895
 -.0962
 -.0835
 -.1132
 -.0998
 -.0798
 -.1248
 -.1259
 -.1089
 -.1156
 -.0974
 -.1109
 -.1314

1.0463
 1.0224
 .9886
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 .6865
 .7350
 .7162
 .7074
 .2556
 .6859
 .3359
 .5378
 .0299
 .1944
 .8175
 1.0700
 1.1925
 1.0427
 -.0021

1.7605
 1.7484
 1.7289
 1.6625
 1.3285
 1.4079
 1.3958
 1.3873
 1.3612
 1.3374
 1.3025
 1.4777
 2.0159
 .6992
 1.2338
 1.5117
 1.9765
 1.8612
 1.7180
 -.0021

.6925
 .7526
 .7338
 -.0191
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 -.0021
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 999.9999
 -.0671
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 .0651
 .1306

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DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11001)

MACH (7) = 3.480 ALPHA (1) = 60.100 Q(PSF) = 6.8600 PO = 60.010 P = .81000 RN/L = 6.8000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L

.027	-.0253	-.0373	.1148	1.0645	1.7979					
.050	-.0333	-.0395	.1237	1.0432	1.7941					
.074	-.0270	-.0413	.1153	1.0077	1.7695					
.098	-.0333	-.0435	.0955	.9407	1.6932					
.111	-.0368	-.0413	-.0475	.2455	1.3035	.6632	.0178	-.0446		
.139	-.0390	-.0458	-.0452	.2888	1.2145	.7511	.0364	-.0430		
.168	-.0396	-.0452	-.0407	.2720	1.2111	.7423	.0262	-.0418		
.191	-.0407	-.0289	-.0374	.2745	1.2060		.0229			
.255	-.0401	-.0452	.0280	.7243	1.3971					
.344	-.0407	-.0294	.0302	.2862	1.1778		.0335			
.392			.0375		1.3689		.0358			
.667	.999	-.0576	.0335	.7097	1.3294		.0448			
.702	-.0593	-.0423	-.0418	.3402	1.2500		.0753			
.724	-.0587	-.0616	-.0270	.5998	1.9151	2.2252	.999	.9999		
.744	-.0644	-.0644	-.0672	.0620	.4448	.6646	-.0143			
.755	-.0655	.999	-.0672	.2112	1.0801	1.1711	-.0024			
.869	-.0599	-.0582	.0358	.7277	1.3872					
.902	.999	-.0604	.0950	1.0521	2.0180		.1114			
.923	-.0559	-.0379	.1294	1.4281	1.6722		.1834			
.945	-.0559	-.0543	.1755	1.0302	1.7013					
.982	-.0537		-.0677		.0369					

MACH (8) = 4.450 ALPHA (1) = 62.000 Q(PSF) = 4.0800 PO = 80.000 P = .29000 RN/L = 5.8000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L

.027	.0655	.0427	.1421	1.0067	1.7263					
.050	.0512	.0416	.1497	.9982	1.7282					
.074	.0617	.0359	.1421	.9707	1.7165					
.098	.0446	.0340	.1241	.9138	1.6647					
.111	.0427	.0368	.0321	.2690	1.1129	1.3120	.6702	.0691	.0359	
.139	.0416	.0396	.0349	.2977	1.2140	1.4267	.7517	.0804	.0311	
.168	.0368	.0445	.0368	.2895	1.2233	1.4391	.7526	.0691	.0340	
.191	.0349	.0512	.0378	.2952	1.2245	1.4419		.0681		
.255	.0340	.0236	.0823	.7394	1.4220					
.344	.0292	.0512	.0852	.3125	1.2055	1.4097		.0719		
.392			.0890		1.4097			.0785		
.667	.999	.0036	.0776	.7422	1.3860			.0814		
.702	.0065	.0389	.1041	.3819	1.3156	1.5272		.1165		
.724	.0055	-.0010	.0475	.6400	2.0183	2.2971		.999	.9999	
.744	.0000	-.0010	-.0029	.1117	.4134	.6315		.0426		
.755	-.0019999	.9999	-.0038	.2122	1.1689	1.2608		.0321		

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11001)

MACH (8) = 4.450 ALPHA (1) = 62.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	.0008	.0027	.0662	.7602	1.4466
.902	.9999	.0027	.2568	1.5415	2.5563
.923	.0093	.0283	.1502	.9230	1.1087
.945	.0084	.0141	.2018	1.0778	1.6890
.982	.0084		.0008		.2341
					.1127
					.1923

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TABULATED SOURCE DATA. MSFC TWI 603 (SA28F)

PAGE 7

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R11002) (22 AUG 75)

REFERENCE DATA

SREF	=	115.2500	SQ. FT.	XMRP	=	104.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

AN-SCH -	1.000	PHI -	.000
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MACH (1) = .705 ALPHA (1) = .59980 O(PSE) = 1.7700 PO = 17.990 P = 16.150 RN/L = 2.9000

SECTION () SRB DEPENDENT VARIABLE CP

IMC TA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
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MACH (2) =	.508	ALPHA (1) =	70.000	QIPSF =	3.6300	PO =	18.030	P =	14.050	RV/L =	4.1000
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SECTION 115RB
B5511 NO 11335

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 250.0000 270.0000 315.0000

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MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (RI1002)

MACH (2) = .608 ALPHA (1) = 70.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L	.344	-.3718	-.3789	-.3963	-.4958	-.6281	.7050	1.0142	-1.1720
.392	.667	.999	.9999	-.4046	-.8122	-.9822	1.0030	-.8053	-.8403
.702	-.5205	-.5749	-.7783	-.6201	-.6898	-.8286	.6453	-.6030	999.9999
.724	-.3841	-.4595	-.5721	-.6600	-.7702	-.7248	1.0773	-1.1058	-1.3326
.744	-.4557	-.4691	-.6881	-.6009	-.8398	.7338	1.0984	999.9999	-1.1058
.755	-.4241	.9999	-.9263	-.6314	-.8359	.6314	.9961	-1.3326	-1.3326
.869	-.6035	-.6167	-.6787	-.6787	-.8281	-.2821	.9957	999.9999	-1.1058
.902	.9999	-.4681	-.6204	-.8800	-.2631	-.2631	1.0858	-1.0470	-1.0470
.923	-.4378	-.4365	-.2049	-.8800	-.2049	-.2049	1.0995	999.9999	-1.1058
.945	-.4315	-.3894	-.1378	-.9856	-.1378	-.1378	1.0163	-1.0470	-1.0470
.982	-.3374	-.3374	-.8617	-.8617	-.8617	-.8617	.6551	999.9999	-1.1058

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 9

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R11003) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .396 ALPHA (1) = 70.000 O(PSF) = 3.1500 PO = 31.990 P = 28.720 RN/L = 5.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.5871	-2.3230	-2.3258	-.7333	-.9922
.050	-.5908	-1.6039	-2.0521	-.6083	1.0279
.074	-.4326	-1.1629	-1.7872	-.5019	1.0470
.098	-.4468	-.7304	-1.7821	-.3772	1.1646
.111	-1.4827	-1.2653	-1.0044	-1.4522	1.0507
.139	-.5540	-.5968	-1.1674	-2.1527	1.0048
.168	-.4750	-.5855	-1.6130	-2.0787	1.9822
.191	-.4590	-5.162	-6.108	-1.8595	1.9720
.255	-.4993	-.4277	-1.6610	-1.7381	1.9678
.344	-.3437	-.3756	-1.3489	-1.4716	1.9583
.392	999.9999	-.4009	-.5263	-.5635	1.9491
.667	999.9999	-.3979	-.5608	-1.5298	1.9412
.702	-.3917	-.3641	-.5430	-1.0940	1.9494
.724	-.3203	-.3635	-.8698	-1.7081	1.0247
.744	-.3630	-.3635	-.9224	-1.9502	1.0250
.755	-.3346	999.9999	-.4800	-1.8156	1.0250
.869	-.5098	-.4168	-.4967	-.6235	1.9548
.902	999.9999	-.5418	-1.4967	-.6321	1.0311
.923	-.3819	-.4358	-1.0508	-.4434	1.0415
.945	-.3409	-.4358	-1.1218	-.2444	1.9784
.982	-.3168		-.8330		1.7684

MACH (2) = .598 ALPHA (1) = 70.020 O(PSF) = 7.4700 PO = 38.020 P = 29.860 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-1.1906	-1.7901	-1.7683	-.3308	1.0066
.050	-.7666	-1.4438	-1.4743	-.2641	1.0530
.074	-.6955	-1.1388	-1.2505	-.2047	1.0857
.098	-.6358	-.8436	-1.6110	-.1272	1.1160
.111	-1.0052	-.9278	-1.0791	-1.7938	1.0818
.139	-.6590	-.7188	-.8045	-1.7919	1.0393
.168	-.6035	-.7153	-.7951	-1.3014	1.0213
.191	-.5690	-.6455	-.7402	-1.9195	1.0073
.255	-.4735	-.4641	-1.2045	-.3115	1.9926

MSFC TWT 603 (5A28F) SR9 - CLEAN ATTACH AFT RING

(R11003)

MACH (2) = .598 ALPHA (1) = 70.030

SECTION : 11SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	- .4270	- .4730	- .5004	- .9619	- 1.3754	.6108	.9835	- .5703
.344							.9770	- 1.1591
.392				- .5197			.9655	- .8249
.667	999.9999	- .5108	- .5363	- 1.4309	- .3794		.9532	- 1.2227
.702	- .4609	- .4549	- .6654	- .8312	- 1.3228	.5960	1.0497	999.9999
.724	- .4002	- .4549	- .5390	- .7111	- 1.4209	.6712	1.0670	- 1.2681
.744	- .4312	- .4370	- .8496	- 1.5249	- 1.4728	.6809	.9774	- 1.6622
.755	- .4101	999.9999	- .9128	- 1.8381	- 1.4929	.5825	.9743	
.669	- .5109		- .6337	- .9530			1.0569	- .9508
.302	999.9999	- .4555	- .4555	- 1.0646	- .4035		1.0694	- 1.1193
.923	- .4014	- .4943	- .4943	- .7369	- .2934		1.0000	
.945	- .3763	- .4546		- .9858	- .1794			
.982	- .3275			- .8425			.6816	

MACH (3) = .899 ALPHA (1) = 70.000 Q(PSF) = 7.3700 PO = 22.010 P = 13.030 RN/L = 6.3000

SECTION 115RB

DEPENDENT VARIABLE CP

1471A 0000 22 5000 45 0000 67 5000 90 0000 12 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

[illegible]

WSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11003)

MACH (4) =	1.200	ALPHA (1) =	70.020	Q(PSF) =	9.1500	PO	=	22.010	P	=	9.0800	RN/L	=	6.7000
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SECTION () SRB

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

XX/7

.027	-.7130	-.7253	-.5869	.5913	1.3337		
.050	-.7084	-	-.5799	.6157	1.3727		
.074	-.6338	-.6753	-.5396	.6251	1.3901		
.098	-.6036	-.6430	-.5148	.6611	1.4084		
.111	-.6029	-.5974	-.4869	.6808	1.3937	.6766	-.4983
.139	-.5424	-.5698	-.5553	.6025	1.1457	1.3609	-.5593
.168	-.5047	-.5066	-.5063	.5727	1.1302	1.3429	-.5170
.191	-.4796	-.4898	-.5336	-.1004	1.1138	1.3331	-.5380
.255	-.4496	-.4564	-.4571	.5337	1.3092		
.344	-.3747	-.3792	-.3818	-.1249	1.0738	.2931	-.3831
.362			-.3200			1.2906	-.3482
.667	999.9999	-.5385	-.5415	.4955		1.2626	-.4981
.702	-.4875	-.4634	-.4549	-.1445	1.0496	1.2730	-.5006
.724	-.4703	-.4525	-.4400	-.1116	1.1425	1.3601	999.9999
.744	-.4804	-.4834	-.5473	-.1590	1.1550	1.3813	-.5572
.755	-.477999.9999	-.5063	-.5165	-.1558	1.0512	1.2757	-.5251
.869	-.4380	-.4586	-.4378	.4972		1.2637	
.902	999.9999		-.4975	.5053		1.3587	
.923	-.4149	-.4109	-.4004	.5192		1.3028	-.4150
.945	-.4030	-.4208	-.4053	.4979		1.2873	-.4170
.982	-.3569		-.44723				
						.7346	

MACH (5) =	1.959	ALPHA (1) =	70.000	Q (PSF) =	10.980	PQ	=	30.010	P	=	4.0900	RN/L	=	7.3000
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SECTION () SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7/1X

027	-2807	-3158	-.0957	.9215	1.6241			
050	-2838	-3033	-.0835	.9240	1.6356			
074	-2705	-.2823	-.0808	1.6704	1.6500			
098	-2838	-2700	-.0871	.8925	1.6500			
111	-2898	-2630	-.2695	.2896	1.3735	1.5893	8525	-0979
139	-2744	-2661	-.1241	.2321	1.3161	1.5427	8141	-1247
168	-2668	-2653	-.2644	.2166	1.2908	1.5035	7864	-1368
191	-2612	-2559	-.2508	.2192	1.2782	1.4894		-1377
255	-2398		-.1394	.7691	1.4788	1.4654		
344	-2142	-2155	-.2161	.2260	1.2599	1.4654		-1292
392			-.1252			1.4513		-1257
667	999.9999	-.2635	-.1226	.7645		1.4681		-1136
702	-2623	-2581	-.2697	.2402	1.2824	1.4908		-1083
724	-2590	-2610	-.2691	.3262	1.4691	1.6723	999.9999	
755	-2577	-2696	-.1771	1.1578	1.3303	1.4554		-1463
755	-2612999.9999		-.2626	.2484	1.3149	1.5184		-1105

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11003)

MACH (5) = 1.959 ALPHA (1) = 70.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869 -.2551
 .902 999.9999
 .923 -.2549
 .945 -.2579
 .982 -.2391

1.5099
 1.6876
 1.6998
 1.5381
 .7428

-1.035
 -.0882

MACH (6) = 2.740 ALPHA (1) = 70.000 O(PSF) = 6.3800 PO = 30.040 P = 1.2100 RN/L = 5.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027 -.0610
 .050 -.1065
 .074 -.0416
 .098 -.1071
 .111 -.1180
 .139 -.1108
 .168 -.1071
 .191 -.1053
 .255 -.1023
 .344 -.0980
 .392 999.9999
 .667 -.1138
 .702 -.1132
 .724 -.1151
 .744 -.1205
 .755 -.1180
 .869 -.1174
 .902 999.9999
 .923 -.1168
 .945 -.1156
 .982 -.0950

1.7714
 1.7704
 1.7698
 1.7583
 1.6701
 1.6355
 1.6143
 1.6033
 1.5839
 1.5639
 1.5639
 1.5511
 1.5918
 1.6485
 1.6192
 1.6479
 1.6622
 1.9025
 1.9207
 1.7459
 .9198

.9098 .0214
 .8746 .0032
 .8527 .0021
 -.0052

.0056
 .0075
 .0214
 .0317
 999.9999
 -.0308
 .0176

1.0299
 1.0117
 .9838
 .9668
 9122
 .8685
 .8503
 .8448
 .8382
 .3511
 .4675
 .1849
 .3576
 .9207
 1.0615
 1.0754
 .9619

.0512
 .0597
 .0505
 .0427
 .0536
 .0044
 -.0088
 .3103
 .3139
 .3272
 .0032
 .0075
 .0135
 .0178
 .0772
 -.0592
 .0021
 .0330
 .1027
 .0651
 .0590
 -.1114

MSFC THT 003 (SA20F) SRB - CLEAN ATTACH AFT RINO (R11003)

MACH (7)	$\alpha_{PWA} (1)$	γ	P_0	P	RN/L
3.480	.70	.020	.69500	.81000	6.8000

SECTION () SRB

THEIA	.0000	22.5000	45.0000	67.5000	90.0000	12.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
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1/x

1.027	-.0108	-.0554	.0950	1.0393	1.7954	
.050	-.0526	-.0565	1.000	1.0268	1.8103	
.074	.0020	-.0548	.0911	.9981	1.8103	
.098	-.0497	-.0542	.0793	.9744	1.7999	
.111	-.0531	-.0514	-.0593	.3746	1.4597	.9073
.139	-.0531	.0508	-.0599	.3419	1.4264	.8768
.168	-.0508	-.0486	.0392	.3305	1.4123	.8607
.191	-.0492	-.0469	.0381	.3372	1.4032	
.255	-.0486	-.0486	.0533	.3532	1.6202	
.344	-.0486	-.0441	-.0548		1.3886	.0522
.392			.0561		1.5999	.0538
.667	.999	-.0576	.0578	.8573	1.5978	.0640
.702	-.0576	-.0249	-.0509		1.4253	.6545
.724	-.0582	-.0593	.0202	.3868	1.7283	.9608
.744	-.0627	-.0644	-.0661	.5155	.8876	1.0437
.755	-.063999	.9999	-.0717	.1954		
.869	-.0593	-.0582	.0342	.3862	1.5143	1.7137
.902	.999	-.0576	.0741		1.6739	1.6739
.923	-.0599	-.0481	1.565	1.1221	1.9779	
.945	-.0599	-.0576	.0911	1.0724	1.9920	.0595
.982	-.0430		.1034	.9535	1.7376	.1097
			-.0565			.8954

MACH (8) =	4.450	ALPHA (1) =	70.020	Q(PSE) =	4.0800	P0 =	80.020	P =	.29000	RN/L =	5.8000
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SECTION 158B (1) NO. 11353

THE TA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

xx

.027	.1079	.0065		.1269	.9954	1.7330	
.050	.0160	.0055		.1316	.9925	1.7510	
.074	.1402	.0027		.1231	.9691	1.7548	
.098	.0188	.0008		.1089	.9394	1.7368	
.111	.0075	.0055	.0027	.1857	.8512	1.3850	.8541
.139	.0065	.0084	.0046	.0823	.3383	1.3765	.6088
.168	.0046	.0103	.0046	.0027	.0701	1.3765	.6012
.191	.0036	.0132	.0055	.0700	.3393	1.3750	.6040
.255	.0046		.0024	.0785		1.6012	
.344	.0036	.0169		.0833	.3762	1.3717	
.392				.0880		1.5908	.0861
.667	.999.9999	.0000		.0880	.8553	1.5960	.0890
.702	-.0067	.0814		.1051		1.5983	.0994
.724	-.0057	.0095		.1364	.4056	1.6581	.1174
.744	-.0095	-.0105		.0133	.5450	1.7974	999.9999
.755	-.0086999.9999			-.0124	.1952	.9148	.0444
				.0643	.3886	1.5035	.0795

MSFC THY 503 (SA28F) SRB - CLEAN ATTACH AFT RING (R11003)

MACH (8) = 4.450 ALPHA (1) = 70.020

SECTION 115RB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.25.0000 225.0000 270.0000 315.0000

xxl

.869 -.0057
 .902 .999.9999
 .923 -.0038
 .945 -.0019
 .982 .0046

-.0038
-.0048
.0122
.0008

.1051
.1857
.1326
.1392
.0038

9043
1.1328
1.0797
9394

1.6675
1.9852
1.9830
1.7159
.9366

6541
8260

6541
8260

1. 9830
1. 7159
. 9366

1. 9830
1. 7159
. 9366

1. 9830
1. 7159
. 9366

1. 9830
1. 7159
. 9366

MSFC TWT 603 (5A28F) SRB - CLEAN ATTACH AFT RING

(R11004)

MACH (2) = .601 ALPHA (1) = 80.120

SECTION 1, SPRB
BRS(1), NO11335

DEPENDENT VARIABLE CP

THETA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	- .5225	- .5585	- .7293	- .9358	- 1.1446	.7024	1.0752	- .6799
.344				- .4712			1.0704	- .7882
.392				- .8817			1.0609	- .6520
.667	- .6322				- .3398		1.0584	- 1.2013
.702	- .5609		- .6507	- .6307	- 1.0244	.6576	1.0818	999.9999
.724	- .5376		- .5823	- .8353	- 1.3424	.6819	1.0855	- 1.1440
.744	- .5262		- .6466	- .8576	- 1.3636	.6767	1.0563	- .7504
.755	- .5531999.9999		- .6261	- 1.1864	- 1.2237	.6464	1.0513	
.869	- .4516	- .4934		- .9492			1.0845	
.902	999.9999	- .5127		- .6348			1.0962	- 1.4158
.923	- .5352	- .5714	- 1.2468	- 1.3560		- .3498	1.0677	- 1.4186
.945	- .5545	- .5947		- 1.2217			.9437	
.982	- .6079		- 1.5627					

MACH (3) =	900	ALPHA (1) =	90.100	D(PSE) =	7.3800	P0	=	22.010	P	=	13.010	RN/L	=	6.3000
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SECTION 11 SRB

DEPENDENT VARIABLE CP

THETA	0000	22	5000	45	0000	67	5000	90	0000	12	5000	135	0000	157	5000	180	0000	225	0000	270	0000	315	0000
THETA	0000	22	5000	45	0000	67	5000	90	0000	12	5000	135	0000	157	5000	180	0000	225	0000	270	0000	315	0000

X/L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																																																																																																																																																																																																																																																																																																													
0.27	-	6655	-	6703	-	6732	-	6793	-	6826	-	6855	-	6886	-	6914	-	6928	-	6938	-	6950	-	6967	-	6977	-	6989	-	6999	-	7000	-	7001	-	7002	-	7003	-	7004	-	7005	-	7006	-	7007	-	7008	-	7009	-	7010	-	7011	-	7012	-	7013	-	7014	-	7015	-	7016	-	7017	-	7018	-	7019	-	7020	-	7021	-	7022	-	7023	-	7024	-	7025	-	7026	-	7027	-	7028	-	7029	-	7030	-	7031	-	7032	-	7033	-	7034	-	7035	-	7036	-	7037	-	7038	-	7039	-	7040	-	7041	-	7042	-	7043	-	7044	-	7045	-	7046	-	7047	-	7048	-	7049	-	7050	-	7051	-	7052	-	7053	-	7054	-	7055	-	7056	-	7057	-	7058	-	7059	-	7060	-	7061	-	7062	-	7063	-	7064	-	7065	-	7066	-	7067	-	7068	-	7069	-	7070	-	7071	-	7072	-	7073	-	7074	-	7075	-	7076	-	7077	-	7078	-	7079	-	7080	-	7081	-	7082	-	7083	-	7084	-	7085	-	7086	-	7087	-	7088	-	7089	-	7090	-	7091	-	7092	-	7093	-	7094	-	7095	-	7096	-	7097	-	7098	-	7099	-	7100	-	7101	-	7102	-	7103	-	7104	-	7105	-	7106	-	7107	-	7108	-	7109	-	7110	-	7111	-	7112	-	7113	-	7114	-	7115	-	7116	-	7117	-	7118	-	7119	-	7120	-	7121	-	7122	-	7123	-	7124	-	7125	-	7126	-	7127	-	7128	-	7129	-	7130	-	7131	-	7132	-	7133	-	7134	-	7135	-	7136	-	7137	-	7138	-	7139	-	7140	-	7141	-	7142	-	7143	-	7144	-	7145	-	7146	-	7147	-	7148	-	7149	-	7150	-	7151	-	7152	-	7153	-	7154	-	7155	-	7156	-	7157	-	7158	-	7159	-	7160	-	7161	-	7162	-	7163	-	7164	-	7165	-	7166	-	7167	-	7168	-	7169	-	7170	-	7171	-	7172	-	7173	-	7174	-	7175	-	7176	-	7177	-	7178	-	7179	-	7180	-	7181	-	7182	-	7183	-	7184	-	7185	-	7186	-	7187	-	7188	-	7189	-	7190	-	7191	-	7192	-	7193	-	7194	-	7195	-	7196	-	7197	-	7198	-	7199	-	7200	-	7201	-	7202	-	7203	-	7204	-	7205	-	7206	-	7207	-	7208	-	7209	-	7210	-	7211	-	7212	-	7213	-	7214	-	7215	-	7216	-	7217	-	7218	-	7219	-	7220	-	7221	-	7222	-	7223	-	7224	-

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 17

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11004)

MACH (4) = 1.195 ALPHA (1) = 80.100 Q(PSF) = 9.1300 PO = 22.000 P = 9.1300 RN/L = 3.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.5928	-.5776	-.6346	.4615	1.2004						
.050	-.5969	-.5930	-.6212	.5048	1.2595						
.074	-.5944	-.5902	-.5974	.5333	1.3091						
.098	-.5706	-.5839	-.5545	.5985	1.3551						
.111	-.5646	-.5652	-.5567	-.0012	1.3884	.6647	-.5142	-.5661			
.139	-.5290	-.5359	-.5378	-.5766	1.4055	.6261	-.5782	-.5471			
.168	-.5046	-.5060	-.5041	-.4981	1.4035	.6099	-.5129	-.5131			
.191	-.4808	-.4883	-.5459	-.0963	1.4011		-.5600				
.255	-.4569	-.4636	-.4706	.5832	1.3931						
.344	-.4105	-.4132	-.4046	-.1059	1.3851		-.4186				
.392	999.9999	-.4909	-.3714	.5498	1.3750		-.3870				
.667	999.9999	-.4791	-.4791		1.3569		-.4959				
.702	-.4701	-.4793	-.4713	-.1293	1.3630		-.5017				
.724	-.4689	-.4659	-.4650	-.1419	1.3909	999.9999					
.744	-.4651	-.4645	-.4663	-.1421	1.3929		-.4973				
.755	-.4691999.9999	-.4809	-.4816	-.1394	1.3590		-.5378				
.809	-.4373	-.4503	-.4302	.5301	1.3502						
.902	999.9999	-.4486	-.4329	.4878	1.3867						
.923	-.4926	-.4914	-.5825	.5164	1.3915		-.6182				
.945	-.4970	-.5363	-.5778	.5348	1.3543		-.5699				
.982	-.4558		-.5784		1.2697						

MACH (5) = 1.956 ALPHA (1) = 80.100 Q(PSF) = 11.000 PO = 30.010 P = 4.1100 RN/L = 7.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.2642	-.2674	-.1385	.8179	1.4951						
.050	-.2680	-.2692	-.1228	.8427	1.5566						
.074	-.2709	-.2720	-.1147	.8433	1.5766						
.098	-.2715	-.2761	-.1012	.8836	1.6305						
.111	-.2734	-.2744	-.0746	.9153	1.6586	.9202	-.0869	-.2764			
.139	-.2674	-.2656	-.1255	.8641	1.6569	.8764	-.1242	-.2663			
.168	-.2513	-.2520	-.1342	.8552	1.6238	.8590	-.1286	-.2522			
.191	-.2431	-.2435	-.1360	.8486	1.6193		-.1280				
.255	-.2346	-.2341	-.1244	.8399	1.5939						
.344	-.2364	-.2353	-.1192	.8399	1.5891		-.1153				
.392	999.9999	-.2492	-.1189	.8469	1.6041		-.1144				
.667	999.9999	-.2478	-.1196		1.5887		-.0998				
.702	-.2478	-.2476	-.1157	.2662	1.3734	1.6046					
.724	-.2452	-.2459	-.1223	.2636	1.4303	1.6010					
.744	-.2552	-.2556	-.1386	.2690	1.4358	1.6724					
.755	-.2538999.9999	-.2570	-.1311	.2508	1.3733	1.6062					

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11004)

$$\text{MACH} (5) = 1.956 \quad \text{ALPHA} (1) = 80.100$$

SECTION 115RB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

7/7

869	-2418	-2389	1169	8330	15887
902	999.9999	-2395	1202	8107	16508
923	-2545	-2564	0985	8340	16467
945	-2586	-2573	1157	8108	16073
982	-1946		2208		13052

- 1206
 - 1107

MACH	(6)	=	2.790	ALPHA	(11)	=	80.100	D(PSE)	=	6.3700	P0	=	30.030	P	=	1.2100	RN/L	=	5.0000
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SECTION 1, NO 1135

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

71X

027	- .0938	- .0980	.0161	.9462	1.6852
050	- .0962	- .0979	.0238	.9474	1.7150
074	- .0956	- .0998	.0202	.9316	1.7380
098	- .0968	- .1010	.0275	.9498	1.7617
111	- .0980	- .1041	.0439	.9783	1.7779
139	- .0985	- .1068	.0687	1.5420	1.7932
168	- .1004	- .1067	.1071	1.5093	1.7532
191	- .1017	- .1090	.1059	.9298	1.7380
255	- .0992	- .1050	.0002	1.4929	1.7295
344	- .0992	- .1017	.0466	.9249	1.7198
392	- .0992	- .0932	.0154	1.4832	1.7138
667	999.9999	- .1102	.0180		1.7065
702	- .1114	- .1053	.0075	.9146	1.7022
724	- .1102	- .1089	.0154	1.4710	1.7107
744	- .1120	- .1120	.0232	1.5348	1.7823
755	- .114999.9999	- .1229	.0552	1.5475	1.7975
869	- .1071	- .1083	.0008	1.4674	1.7162
902	999.9999	- .1089	.0208	.9346	1.7229
923	- .1095	- .1023	.0287	.9207	1.7860
945	- .1126	- .1102	.0556	.9419	1.8042
982	- .0592		.0251	.9274	1.7894
			- .0695		1.4395

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11004)

MACH	(7)	ALPHA	(1)	β	PO	P	RM/L
0.5	3.480	80.080	0.155	6.8640	60.000	0.91000	6.8000

SECTION (1) SR8
DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

MACH (B) =	ALPHA (1) =	PO	P	RM/L
4.450	82.000	80.020	.29000	5.8000

SECTION () USRB
DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

TABULATED SOURCE DATA, MSFC TWT 603 (5A28F)

(R11004)

MSFC TWT 603 (SA28F) SR8 - CLEAN ATTACH AFT. RING

$$\text{MACH} (8) = 4.450 \quad \text{ALPHA} (1) = 82.000$$

SECTION : 11SRB

DEPENDENT VARIABLE CP

THE 'A' .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

X/L

.869	.0384
.902	.9999
.923	.0169
.945	.0150
.982	.0340

698. 0384.

6666 206 9999

5923 .0169
0945 .0150

343	.0130
982	.0340

.0093

2010.

0207
0233

1070

.1032

1079
1159

.1438
.0975

.0340

9309

9176
1566

1168
15170

•
•
•
•
•

1.7379

1.7557

1.7478

1.4277

1070

8501

(R11005) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000

MACH (1) = .400 ALPHA (1) = 90.000 O(PSF) = 1.8100 P0 = 18.020 P = 16.140 RN/L = 3.0000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 57.5000 67.5000 79.0000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.945	.982
	-.5870	-.6137	-.5621	-.5585	-.5741	-.6106	-.6501	-.6033	-.5741	-.5952	-.6248	-.6482	-.5144	-.4978	-.4979	-.5037	-.5260	-.5879	-.6840	-.6866
	-.5960	-.6079	-.6005	-.5786	-.5972	-.6117	-.6501	-.6033	-.5741	-.5952	-.6248	-.6482	-.5144	-.4978	-.4979	-.5037	-.5260	-.5879	-.6840	-.6866
	-.5905	-.5841	-.5557	-.5861	-.6016	-.6313	-.6900	-.6313	-.5861	-.5905	-.5841	-.5557	-.5861	-.6016	-.6313	-.6900	-.6313	-.5861	-.5905	-.5841
	-.4122	-.3685	-.3376	-.2697	-.2116	-.1384	-.0332	-.3819	-.2060	-.9943	-.7112	-.3265	-.8944	-.10346	-.8615	-.11889	-.8228	-.10761	-.5669	-.8228
	.7217	.6033	.8805	.9496	.10158	.1100	.1182	.1252	.1307	.1210	.1309	.1208	.1210	.1211	.1340	.1240	.1281	.1225	.11094	.1167
	-.2027	-.7002	-.2687	-.10541	-.6145	-.6025	-.6220	-.7870	-.10636	-.5742	-.5502	999.9999	-.9772	-.9073	-.13817	-.14143				

MACH (2) = .597 ALPHA (1) = 90.000 O(PSF) = 3.5300 P0 = 18.000 P = 14.150 RN/L = 4.1000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 57.5000 67.5000 79.0000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.945	.982
	-.5700	-.5782	-.6122	-.6507	-.5187	-.6238	-.6234	-.6126	-.5242	-.6313	-.5411	-.5700	-.5813	-.3433	-.3321	-.2451	-.7868	-.8187	-.9819	-.8789
	-.5700	-.5782	-.6122	-.6507	-.5187	-.6238	-.6234	-.6126	-.5242	-.6313	-.5411	-.5700	-.5813	-.3433	-.3321	-.2451	-.7868	-.8187	-.9819	-.8789
	-.5700	-.5813	-.6206	-.8959	-.8187	-.9819	-.10603	-.11823	-.2029	-.2155	-.1466	-.5700	-.5813	-.3433	-.3321	-.2451	-.7868	-.8187	-.9819	-.8789
	-.3614	-.3433	-.6206	-.8959	-.8187	-.9819	-.10603	-.11823	-.2029	-.2155	-.1466	-.3614	-.3433	-.6206	-.8959	-.8187	-.9819	-.8789	-.10603	-.11823
	.7092	.7905	.8606	.9322	.10031	.1143	.1252	.1278	.1343	.1333	.1343	.7092	.7905	.8606	.9322	.10031	.1143	.1252	.1278	.1343
	-.1320	-.6863	-.7173	-.1575	-.10450	-.6267	-.1542	-.6011	-.5994	-.6051		-.1320	-.6863	-.7173	-.1575	-.10450	-.6267	-.1542	-.6011	-.5994

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R11005)

MACH (2) = .597 ALPHA (1) = 90.000

SECTION 115RB

DEPENDENT VARIABLE CP

THE TA
.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	344	- .6838	- .5934	- .6578	- .8307	- .9432	.7678	1.1336	- .6998
	392			- 1.0008				1.1324	- 1.0213
	667				- .8694		- .1881	1.1333	- .5646
	702	- .7250		- .6371	- .7182	- .8860		1.1308	- .5343
	724	- .6984	- .5838	- .6715	- .8846	- 1.1427	.7573	1.1363	999.9999
	744	- .6437	- .5501	- .5544	- .6957	- 1.0391	.7460	1.1346	- 1.0235
	744	- .6603	- .5286	- .5569	- .5824	- .6956	.7423	1.1321	- 1.0051
	755	- .6503	999.9999					1.1294	
	869	- .5983		- .6942	- .8448		- .2749	1.1303	
	902	- .5076		- .6933	- .8954		- .3956	1.1307	- 1.4058
	923	- .5756		- .7042	- 1.4614		- .3048	1.1308	- 1.4288
	945	999.9999		- .7621	- 1.4597		- .1519	1.0997	
	982	- .5317			- .9413				

MSFC TWT 603 (SA28F) 588 - CLEAN ATTACH AFT RING (R11007) 1 22 AUG 75)

REFERENCE DATA

SREF	=	116.2600	SG.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

RN-SCH	=	2.000	PHI	=	.000
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WACH ()	TOP	ALPHA ()	Q (PSF)	PQ	P	RN/L	5,3000
			90 000	3 1800	32.000	28.700	

SECTION 115RB

DEPENDENT VARIABLE CP

0000 22 5000 45 0000 67 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

[illegible]

SECTION 11 SRB

DEPENDENT VARIABLE CP

147A 0000 22 45000 45.00000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

DATE 07 MAR 77

TABULATED SOURCE DATA, NSFC TNT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11007)

MACH (5) = 1.968 ALPHA (1) = 90.000

SECTION () SRB

THEIA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7/1X

	.869	- .2499	- .2475	- .1319	.8556	1.6338
	.902	.999	.9999	- .2521	.7749	1.6212
	.923	- .2626	- .2660	- .1139	.7991	1.6461
	.945	- .2647	- .2633	- .1141	.8200	1.6535
	.982	- .1470		- .1795		1.6238

MACH (6)	ALPHA (1)	Q(PSF)	PO	P	RN/L
2.740	90.000	6.3700	30.030	1.2100	5.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

71X

1	0.027	- .0756	- .0871	- .0181	.7884	1.5087			
2	0.050	- .0841	- .0889	- .0106	.8230	1.5536			
3	0.074	- .0774	- .0913	- .0056	.8244	1.5900			
4	0.098	- .0835	- .0932	- .0135	.8728	1.6325			
5	0.111	- .0859	- .0907	- .1011	.3655	1.6885	9.164	.0232	- .0926
6	0.139	- .0877	- .0901	- .0944	.3576	1.7769	.9531	.0076	- .0932
7	0.168	- .0885	- .0877	- .0950	.3649	1.5372	.9589	.0117	- .0949
8	0.191	- .0895	- .0841	- .0950	.3746	1.5293		.0172	
9	0.255	- .0914	- .0955	.0232	.9632	1.7562			
10	0.344	- .0956	- .0859	- .0950	.3867	1.5287		.0263	
11	0.392			.0291		1.7568		.0283	
12	0.667	999.9999	- .1071	.0238	.9508	1.7599		.0342	
13	0.702	- .1071	- .0956	- .1077	.3697	1.7635		.0323	
14	0.724	- .1065	- .1085	- .0974	.3424	1.7817	999.9999	.0305	
15	0.744	- .1089	- .1083	- .1229	.3564	1.5044		.0330	
16	0.755	- .1083999.9999		- .1217	.3582	1.7587			
17	0.869	- .1059	- .1077	.0119	.9328	1.7593			
18	0.902	999.9999	- .1095	- .0046	.8685	1.7672		.0022	
19	0.923	- .1101	- .0998	.0352	.8976	1.7659		.0202	
20	0.945	- .1089	- .1071	.0141	.9079	1.7842			
21	0.982	- .0034		- .0228		1.8169			

NSFC TWT 603 (SA28F) SR8 - CLEAN ATTACH AFT RING

(R11007)

MATCH	(7)		ALPHA / I	=	96 020	USDC	=	6 8600	PQ	=	60-010	P	=	.81000	RN/L	=	6.8000
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BU511 NO11335

DEPENDENT VARIABLE CP

0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

7/1X

[illegible]

MACH (8)	ALPHA (1)	PO	P	RM/L
4.450	90.000	4.0800	.29000	5.7000

SECTION : 11SR0

DEPENDENT VARIABLE: CP

1141A 0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7/8

0.27	.0871	.0131	.0681	.7413	1.4362	
.050	.0169	.0112	.0710	.7839	1.5102	
.074	.1032	.0093	.0681	.7868	1.5452	
.088	.0207	.0084	.0767	.8347	1.5822	
	.0131	.0074	.1591	.8645	1.6438	.0861
.139	.0103	.0055	.0952	.9110	1.7339	.0804
.168	.0084	.0055	.0851	.9261	1.7424	.0871
.191	.0103	.0141	.0880	.9343	1.7472	.0899
.255	.0074	.0065	.0994	.9546	1.7661	
.344	.0036	.0150	.0074	.94208	1.7775	.1013
.392			.1079		1.7794	.1041
.667	.999,9999	-.0048	.1041	.9461	1.7737	.1108
.702	-.0076	.0615	.0956		1.7775	.1079
.724	-.0067	-.0076	.0880	1.5272	1.7756	999,9999
.744	-.0067	.744	-.0095	1.5177	1.7737	.1117
.755	-.0086999,9999		.0909	1.5102	1.7737	.1127
			-.0086	1.5093	1.7756	.1127

.0861	.0122
.0804	.0112
.0871	.0141
.0899	
.1013	
.1041	
.1108	
.1079	
.999	.9999
.1117	
.1127	

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 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11007)

MACH (8) =	4.450	ALPHA (1) =	90.000				
SECTION (1) SRB				DEPENDENT VARIABLE CP			
THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000
X/L	.859	-.0076	-.0067	.0918	.9223	1.7510	
	.902	.999	-.0048	.0795	.8569	1.7519	
	.923	-.0010	-.0084	.1260	.8787	1.7286	.0833
	.945	-.0038	-.0010	.0852	.8652	1.7282	.0909
	.982	.0539		.0473		1.9472	

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

(R11008) (22 AUG 75)

MSFC TWT 603 (5A28F) SRB - CLEAN ATTACH AFT RING

REFERENCE DATA

SREF	=	115.2600	SO.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

BN-SCH =	2.000	PHI =	.000
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[illegible]

DEPENDENT VARIABLE CP

SECTION 115RB

14FTA 0000 22 5000 45 0000 67 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

X/L	027	-6836	-8416	-7710	-5916	7106
	050	-6271	-5802	-7507	-4611	7693
	074	-5537	-6219	-5957	-4817	8527
	098	-5734	-6319	-7437	-4512	9226
	111	-6116	-7813	-9351	-3989	9834
	139	-6245	-6574	-8120	-5383	10708
	168	-5921	-6166	-6549	-5900	10849
	191	-5868	-5623	-6720	-7569	10872
	255	-5635	-5348	-7528	-5739	10904
	344	-6191	-5845	-7429	-5958	10763
	392	999	-5163	-7672	-10849	10880
	667	999	-5299	-7361	-5129	10849
	702	5398	-5824	-7582	-5936	10810
	724	5414	-8056	-9443	5840	10856
	744	4937	-6350	-7352	5732	10856
	795	5587	-6148	-7100	5756	10856
	863	6014	-7694	-7658	10817	10817
	902	999	-6221	-7523	-7072	10872
	923	6566	-7107	-7032	-5339	10764
	945	6711	-7067	-7326	-2731	10856
	982	6558	-7576	-7576	-10732	10732

DATE	AMOUNT	DESCRIPTION	PAID	BALANCE
1950	100.00	PAID	100.00	0.00
1951	200.00	PAID	200.00	0.00
1952	300.00	PAID	300.00	0.00
1953	400.00	PAID	400.00	0.00
1954	500.00	PAID	500.00	0.00
1955	600.00	PAID	600.00	0.00
1956	700.00	PAID	700.00	0.00
1957	800.00	PAID	800.00	0.00
1958	900.00	PAID	900.00	0.00
1959	1000.00	PAID	1000.00	0.00
1960	1100.00	PAID	1100.00	0.00
1961	1200.00	PAID	1200.00	0.00
1962	1300.00	PAID	1300.00	0.00
1963	1400.00	PAID	1400.00	0.00
1964	1500.00	PAID	1500.00	0.00
1965	1600.00	PAID	1600.00	0.00
1966	1700.00	PAID	1700.00	0.00
1967	1800.00	PAID	1800.00	0.00
1968	1900.00	PAID	1900.00	0.00
1969	2000.00	PAID	2000.00	0.00
1970	2100.00	PAID	2100.00	0.00
1971	2200.00	PAID	2200.00	0.00
1972	2300.00	PAID	2300.00	0.00
1973	2400.00	PAID	2400.00	0.00
1974	2500.00	PAID	2500.00	0.00
1975	2600.00	PAID	2600.00	0.00
1976	2700.00	PAID	2700.00	0.00
1977	2800.00	PAID	2800.00	0.00
1978	2900.00	PAID	2900.00	0.00
1979	3000.00	PAID	3000.00	0.00
1980	3100.00	PAID	3100.00	0.00
1981	3200.00	PAID	3200.00	0.00
1982	3300.00	PAID	3300.00	0.00
1983	3400.00	PAID	3400.00	0.00
1984	3500.00	PAID	3500.00	0.00
1985	3600.00	PAID	3600.00	0.00
1986	3700.00	PAID	3700.00	0.00
1987	3800.00	PAID	3800.00	0.00
1988	3900.00	PAID	3900.00	0.00
1989	4000.00	PAID	4000.00	0.00
1990	4100.00	PAID	4100.00	0.00
1991	4200.00	PAID	4200.00	0.00
1992	4300.00	PAID	4300.00	0.00
1993	4400.00	PAID	4400.00	0.00
1994	4500.00	PAID	4500.00	0.00
1995	4600.00	PAID	4600.00	0.00
1996	4700.00	PAID	4700.00	0.00
1997	4800.00	PAID	4800.00	0.00
1998	4900.00	PAID	4900.00	0.00
1999	5000.00	PAID	5000.00	0.00
2000	5100.00	PAID	5100.00	0.00
2001	5200.00	PAID	5200.00	0.00
2002	5300.00	PAID	5300.00	0.00
2003	5400.00	PAID	5400.00	0.00
2004	5500.00	PAID	5500.00	0.00
2005	5600.00	PAID	5600.00	0.00
2006	5700.00	PAID	5700.00	0.00
2007	5800.00	PAID	5800.00	0.00
2008	5900.00	PAID	5900.00	0.00
2009	6000.00	PAID	6000.00	0.00
2010	6100.00	PAID	6100.00	0.00
2011	6200.00	PAID	6200.00	0.00
2012	6300.00	PAID	6300.00	0.00
2013	6400.00	PAID	6400.00	0.00
2014	6500.00	PAID	6500.00	0.00
2015	6600.00	PAID	6600.00	0.00
2016	6700.00			

DEPENDENT VARIABLE CP

SECTION 11588

	0000	77	5000	66	0000	80	0000	112	5000	135	0000	157	5000	180	0000	223	0000	279	0000	315	0000
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[illegible]

1.0927	- .2382	- .1914	- .6803	- .6948
1.1049	- .2327	- .1728	- 1.6468	- .6092
1.1408	- .10329			- .7017

DATE 07 MAR 77

TABULATED SOURCE DATA. MSFC TWT 603 (5A28F)

MSFC TWT 603 (SA28F) SRR - CLEAN ATTACH AFT RING (R11008)

RM/L • 6.7000

2

PO - 22.010

MACH (M) - 100 11 BVA (11) *

DEPENDENT VARIABLE CP

SECTION 1135

0000 22 5000 45 0000 67 5000 90 0000 125 0000 157 5000 180 0000 225 0000 270 0000 315 0000

71X

027	-4933	-4969	-5040	3308	1.0343	
050	-4986	-4992	-5065	3879	1.1000	
074	-4917	-5009	-4991	4240	1.1610	
098	-4871	-5030	-5190	5068	1.2259	
111	-4899	-4799	-5244	-0748	1.2784	5622
129	-4795	-4764	-4751	-1046	1.1533	5852
168	-4685	-4709	-4684	-1057	1.1747	5917
191	-4657	-5194	-5408	-0947	1.1722	4980
255	-4257	-4259	-4238	5897	1.4075	
332	-4194	-4188	-4139	-0908	1.1832	4100
367	999.9999	-4157	-4052	6225	1.4050	4347
702	-4248	-4261	-4318	-1014	1.4065	4020
724	-4225	-4270	-4258	-1274	1.1758	4212
744	-4286	-4401	-4687	-1262	1.1682	999.9999
755	-4286999.9999	-4697	-4757	-1109	1.1621	5852
869	-4874	-4912	-5063	5544	1.4092	4697
902	999.9999	-4877	-4858	4959	1.4030	4872
923	-4943	-4761	-6101	5346	1.4111	
945	-4989	-6638	-5383	5874	1.4108	6232
982	-4234		-5194		1.4029	5419
					1.3642	

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

DATE 07 MAR 77

(R11009) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = .500 ALPHA (1) = 90.000 Q(PSF) = 7.5000 PO = 37.990 P = 29.790 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	-.6678	-.6370	-.6190	-.6330	-.6334	-.6339	-.6327	-.6068	-.5296	-.5955	-.5963	-.5217	-.5104	-.5483	-.4946	-.4940	-.6222	999.9999	7214	-.7647	-.7844
	-.6301	-.7069	-.6772	-.7458	-.7947	-.6016	-.6130	-.5967	-.5967	-.5967	-.5967	-.5217	-.5314	-.5381	-.5231	-.4940	-.6222	999.9999	7214	-.7647	-.7844
	-.6228	-.7101	-.3707	-.7394	-.7007	-.6990	-.6207	-.6149	-.5923	-.5222	-.7290	-.7172	-.7072	-.7008	-.6996	-.3246	-.4558	-.3461	-.1157	-.1160	1.0878
	-.4252	-.4180	-.3707	-.2620	-.1988	-.2347	-.2489	-.7380	-.7380	-.7290	-.7290	-.7172	-.7072	-.7008	-.6996	-.3246	-.4558	-.3461	-.1157	-.1160	1.0878
	.7056	.7836	.8517	.9271	.9989	1.1014	1.1033	1.1110	1.1120	1.1123	1.1121	1.1130	1.1157	1.1173	1.1173	1.1130	1.1137	1.1196	1.1157	1.1160	1.0878
	-.1517	-.2087	-.2342	-.6181	-.6321	-.5988	-.6318	-.12538	-.7981	-.8868	-.9146	-.6689	999.9999	-1.2012	-1.4031			-1.5874	-1.5665		

MSFC THT 603 (SA29F) SR8 - CLEAN ATTACH AFT RING (R11010) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

REFERENCE DATA

SREF	=	116.2600	SO. FT.	YMRP	=	1044	.0000	IN.
LREF	=	146.0000	IN.	YMRP	=		.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=		.0000	IN.
SCALE	=		.0055					

PARAMETRIC DATA

MACH (1) = .398 ALPHA (1) = 99.900 Q(PSF) = 3.1800 P0 = 32.000 P = 28.690 RN/L = 5.3000

SECTION () SRB

THETA
 .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

MACH (2) =	.603	ALPHA (1) =	99.900	Q(PSF) =	7.5700	P0	=	38.030	P	=	29.740	RN/L	=	8.9000
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SECTION () 5RB

THEIA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-7152	-7689	-8157	-6579	.4619	-6129
.027	-7152	-7689	-8157	-6579	.4619	-6129
.050	-7063	-7091	-1,2240	-6432	.5395	-6002
.074	-6361	-7111	-7705	-5552	.6122	-6772
.098	-5985	-6741	-1,0730	-4410	.6981	-7593
.111	-5870	-6038	-1,4430	-3728	.7536	-8664
.139	-5548	-5880	-1,6209	-3040	.8007	-1,4708
.168	-5808	-5883	-1,1149	-2836	.9807	-1,5501
.191	-6028	-6402	-7019	-2407	1,0180	-7593
.255	-4615	-5480	-1,1411		1,0319	-9664
					.6691	
					.6704	
					.6330	
					.4430	

DATE 07 MAR 77 TABULATED SOURCE DATA. MSFC TWT 603 (SA28F) MSFC TWT 603 (SA28F) (R11010)

MACH (5) = 1.956 ALPHA (1) = 99.900

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	.2597	-.2585	-.1473	.8121	1.6196
.869	-.2597					
.902	999.9999	-.2595		-.1629	.7468	1.6291
.923	-.2702	-.2555		-.1172	.7744	1.5803
.945	-.2709	-.2757		-.0756	.8241	1.5935
.982	.0010			-.1466		1.6554

-.1381
-.0627

MACH (6) = 2.740 ALPHA (1) = 99.900 OIPSF = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.0000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0574	-.0986	-.0483	.6155	1.2514
.050	-.0974			-.0387	.6501	.9371
.074	-.0422	-.0986		-.0313	.6652	.9207
.098	-.0938	-.0992		-.0112	.7162	.8997
.111	-.0968	-.0962	-.1047	.0317	.7229	.8163
.139	-.0980	-.0968	-.1053	.0099	.9104	.8467
.168	-.0986	-.0974	-.1083	.0178	.9353	.8600
.191	-.0980	-.0974	-.1095	.0214	.9746	1.2198
.255	-.0992	-.0986	-.1144	.0251	1.2920	1.4662
.344	-.1008			.0263	1.4789	1.6980
.382	999.9999	-.1004		.0275	1.7016	1.7119
.667	999.9999	-.1055		.0215	1.3242	1.7223
.702	-.1055	-.0756	-.1114	.0166	1.4917	1.7629
.724	-.1059	-.1071	-.0574	.0105	1.3442	1.7490
.744	-.1071	-.1059	-.1211	.0190	1.5062	1.7265
.755	-.1071	999.9999	-.1199	.0160	1.4795	1.7223
.869	-.1132	-.1138	-.0046	-.0046	1.3667	1.7793
.902	999.9999	-.1150	-.0210	-.0210	1.4201	1.6955
.923	-.1156	-.1023	.0257	.0257	1.6994	1.6877
.945	-.1156	-.1217	.0416	.0416	1.7107	1.7993
.982	.0991		.0014	.0014		

.7144 -.0192 -.0968
.9129 .0020 -.0971
.9311 .0147 -.0980
.0190
.0220
.0208
.0269
.0232
999.9999
.0390
.0275

-.0082
.0530

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11010)

MACH (7) =	3.480	ALPHA (1) =	99.900	O(P5) =	6.8600	P0 =	59.980	P =	.81000	RN/L =	6.9000
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SECTION : 11SRB

DEPENDENT VARIABLE CP

THE 1A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

7/1X

.027	-.0058	-.0146	-.0001	.6170	1.2556	
.050	-.0083	-.0175	.0071	.6379	1.2900	
.074	-.0007	-.0221	.0127	.6497	1.3064	
.098	-.0088	-.0262	.0274	.6942	1.3368	
.111	-.0169	-.0239	-.0289	.6970	1.1959	.6791
.139	-.0181	-.0221	.0342	.3596	1.4632	.14033
.168	-.0243	-.0175	.0513	.9388	1.4947	.16987
.191	-.0262	-.0129	.0238	.3761	1.4955	.7223
.255	-.0289	-.0356	.0619	.9490	1.7336	.7252
.344	-.0339	-.0128	.0644	.3710	1.5084	.17432
.392			.0646		1.7455	.0646
.667	.999	-.0503	.0595	.9343	1.7500	.0669
.702	-.0497	-.0202	.0579		1.5329	.0609
.724	-.0492	-.0554	.0521	.3752	1.7753	.999
.744	-.0520	-.0542	.0657	.3436	1.3300	.9999
.755	-.0531999	.9999	.0623	.4028	1.5442	.0872
.869	-.0503	-.0497	.0409	.3780	1.5110	.0736
.902	.999	-.0508	.0257	.9033	1.7487	
.923	-.0525	-.0418	.0618	.7844	1.8097	.0258
.945	-.0514	-.0542	.0669	.8508	1.7224	.0748
.982	.0815		.0330	.8351	1.6825	
					1.8131	

MACH (8) =	4.450	ALPHA (1) =	99.900	Q(PSF) =	4.0800	PO	=	80.020	P	=	.29000	RN/L	=	5.8000
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SECTION : 11SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

7/1X

.027	.0701	.0539	.0567	.5837	1.1823			
.050	.0605	.0501	.0605	.6351	1.2784			
.074	.0553	.0454	.0605	.6427	1.2959			
.098	.0567	.0406	.0653	.6787	1.3111			
.111	.0511	.0454	.1023	.6832	1.3765	.6692	.0681	.0444
.139	.0492	.0501	.1041	.6777	1.4272	.6571	.0889	.0397
.168	.0435	.0539	.1060	.9088	1.4599	1.6869	.0938	.0349
.191	.0378	.0567	.1070	.3913	1.4647	1.6980	.9119	
.255	.0378	.0264	.1089	.9290	1.7125		.0956	
.344	.0302	.0548	.1079	.3973	1.4917	1.7235	.0975	
.392			.1098		1.7244		.1004	
.667	.999	.0065	.0985	.9129	1.7197		.1023	
.702	.0056	.0397	.0927		1.7442		.0984	
.724	.0074	.0000	.0872		1.5002	1.6526	999.9999	
.744	.0008	.0008	.3525		1.2475		.1193	
.755	.0008999	.9999	.4150		1.5206			
			.0046		1.4755	1.7396	.1098	
			.0966					
			.3819					
			.0292					
			.0378					
			.0036					
			.0046					

DATE 07 MAR 77
TABULATED SOURCE DATA, MSFC INT 603 (SA28F)
MSFC INT 603 (SA28F) SRB - CLEAN ATTACH AFT RING
(R11010)

MACH (8) = 4.450 ALPHA (1) = 99.900

SECTION	SR8	DEPENDENT VARIABLE CP
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
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27	27	27
28	28	28
29	29	29
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32	32	32
33	33	33
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90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

	X/L				
	.869	.0055	.0074	.0757	.8721
	.902	.999	.0017	.0624	.6991
	.923	.0112	.0178	.8174	1.6619
	.945	.0103	.0131	.0909	1.5841
	.982	.1031	.981	.7754	1.7083
					1.6384
					1.6373
					1.6619
					1.5841
					1.7083
					1.6384
					1.6373
					1.6619
					1.5841
					1.7083
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					1.6373
					1.6619
					1.5841
					1.7083
					1.6384
					1.6373
					1.6619
					1.5841
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					1.6373
					1.6619
					1.5841
					1.7083
					1.6384
					1.6373
					1.6619
					1.5841
					1.7083

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (15A28F)

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MSFC TWT 603 (15A28F) SRB - CLEAN ATTACH AFT RING (R11011) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000

MACH (1) = .395 ALPHA (1) = 110.000 Q(PSF) = 1.7700 PO = 18.010 P = 18.170 RN/L = 3.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.4029	-.4226	-.3912	-.4072	.3832
.050	-.4741	-.4736	-.4180	-.4244	3.8922
.074	-.4865	-.6436	-.7214	-.5377	.4898
.098	-.3705	-.4445	-.9387	-.5236	.5395
.111	-.3683	-.3899	-.6279	-.5179	-.5038
.139	-.3556	-.3903	-.4162	-.3532	-.5266
.168	-.3420	-.3967	-.4872	-.3057	-.2898
.191	-.4388	-.4512	-.4765	-.6092	-.1935
.255	-.5405	-.5462	-.5249	-.5553	-.4720
.344	-.4180	-.5861	-.7799	-.2431	-.4637
.392	.999.9999	-.4726	-.1942	.6401	-.1.2005
.667	.999.9999	-.5816	-.4484	-.2913	-.1.2119
.702	-.5257	-.5816	-.8352	-.2402	-.4811
.724	-.5116	-.5207	-.8063	-.1.3829	-.5583
.744	-.5122	-.5229	-.5547	-.9116	999.9999
.755	-.5349999.9999	-.9383	-.5512	-.7086	-.6474
.869	-.6963	-.6227	-.1.5404	-.5660	-.6340
.902	.999.9999	-.6330	-.1.7104	-.6235	1.0405
.923	-.7417	-.6142	-.1.2083	-.4759	1.1272
.945	-.4839		-.1.2160	-.2128	.9951
.982	-.4618		-.1.3648		.8560
					1.1065

MACH (2) = .599 ALPHA (1) = 110.000 Q(PSF) = 3.5500 PO = 18.010 P = 14.140 RN/L = 4.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.4663	-.4776	-.4565	-.4846	.3248
.050	-.5902	-.5666	-.6428	-.5697	.3757
.074	-.5184	-.5001	-.9216	-.5973	.4264
.098	-.3806	-.4536	-.7651	-.5044	.4829
.111	-.3565	-.4211	-.5522	-.4817	.4785
.139	-.3420	-.4620	-.4861	-.2773	-.4903
.168	-.4212	-.3886	-.4705	-.7536	-.2649
.191	-.5129	-.4536	-.4470	-.4524	-.9281
.255	-.5100	-.5578	-.6297	-.1971	-.1923
					-.4591
					-.5214
					.9492
					.6263
					.8725
					.5503
					.2257
					.4903
					-.4058
					-.4296
					-.4944

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TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

PAGE 42

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11012) (22 AUG 75)

REFERENCE DATA

SREF • 116.2800 SQ.FT. XMRP • 1044.0000 IN.
 LREF • 146.0000 IN. YMRP • .0000 IN.
 UREF • 146.0000 IN. ZMRP • .0000 IN.
 SCALE • .0055

PARAMETRIC DATA

RM-SCH • 2.000 PHI • .000

MACH (1) • .398 ALPHA (1) • 110.000 Q(PSF) • 3.1800 PO • 32.010 P • 28.700 RM/L • 5.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 360.0000

X/L

.027	-.5048	-.5092	-.5992	-.6153	-.3648							
.050	-.5406	-.5893	-.9912	-.7810	-.3963							
.074	-.5017	-.5599	-1.1467	-.8029	-.4293							
.098	-.4356	-.4276	-1.4656	-.6955	-.4820							
.111	-.4023	-.4100	-.4749	-.5227	-.1742	-.6313	-1.5930	-.4262				
.139	-.4229	-.4369	-.4449	-1.6159	-.5773	-.5473	-1.7146	-.4433				
.168	-.4448	-.4511	-.5741	-1.7087	-.5758	-.5516	-1.8270	-.5064				
.191	-.4591	-.4573	-.6442	-1.6835	-1.6938	-.4812	-.9058	-.16772				
.255	-.5426	-.6573	-.14877	-.5855	-.9269		-.12824					
.344	-.5704	-.5517	-.6742	-1.4406	-.9311		-1.5308					
.392				-1.6225	-.9361		-2.0133					
.607	999.9999	-.6124	-.2065		-.9594		-2.0410					
.702	-.4148	-.4498	-.9553	-2.0324	-.5145		999.9999					
.724	-.5300	-.5098	-.8941	-1.4530	-.4337	1.0404						
.744	-.5903	-.5590	-.6580	-.8729	-.5656	-.9995						
.755	-.6747999.9999		-.6499	-.9103	-.5257	-.9749	-1.7233					
.869	-.4336	-.6009	-.24281	-.6673	-.9629							
.902	999.9999	-.5363	-1.4140	-.6447	1.0738		-1.4582					
.923	-.5877	-.5663	-.9233	-.5237	-.9292		-1.2658					
.945	-.5340	-.5903	-1.2473	-.2511	-.9255							
.982	-.4553		-1.4550		1.0402							

MACH (2) • .599 ALPHA (1) • 110.000 Q(PSF) • 7.4800 PO • 37.990 P • 29.820 RM/L • 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 360.0000

X/L

.027	-.5174	-.5354	-.7238	-.7880	-.2814							
.050	-.5070	-.5181	-.9252	-.7990	-.3343							
.074	-.5134	-.4977	-1.2395	-.7259	-.3917							
.098	-.4850	-.4323	-1.1607	-.6024	-.4527							
.111	-.4802	-.4584	-.4205	-1.3977	-.4851	-.5833	-1.4881	-.4696				
.139	-.4260	-.4439	-.4297	-1.1517	-.5050	-.3856	-1.5825	-.5101				
.168	-.4635	-.5007	-.5975	-1.7142	-.5622	-.3516	-1.1288	-.5388				
.191	-.4998	-.5461	-.5308	-.5608	-.5717	-.3136	-.1848					
.255	-.5335	-.6359	-.11546	-.3337	-.9423							

DATE 07 MAR 77 TABULATED SOURCE DATA. MSFC TWT 603 (SA28F) MSFC TWT 603 (SA28F) (R11012)

MACH (2) = .599 ALPHA (1) = 110.000		MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING		P		RV/L	
SECTION (1) SRB		DEPENDENT VARIABLE CP		P		RV/L	
THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000		DEPENDENT VARIABLE CP		P		RV/L	
X/L							
.344	-.5887	-.6620	-.6732	-.6828	-1.0503	.5981	.9572
.392	999.9999						.9585
.702	-.5514	-.5348	-.9821	-1.6399	-1.7307	-.3726	.9862
.724	-.6089	-.5417		-1.0825	-1.4939	.5091	.9909
.744	-.5700	-.5427		-1.0825	-1.4939	.5091	.9909
.755	-.5952	999.9999		-1.0825	-1.4939	.5091	.9909
.859	-.7416			-1.0825	-1.4939	.5091	.9909
.902	999.9999			-1.0825	-1.4939	.5091	.9909
.923	-.7526			-1.0825	-1.4939	.5091	.9909
.945	-.5460			-1.0825	-1.4939	.5091	.9909
.982	-.4688			-1.0825	-1.4939	.5091	.9909

MACH (3) = .898 ALPHA (1) = 110.000 O/P/SF = 7.3600		MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING		P		RV/L	
SECTION (1) SRB		DEPENDENT VARIABLE CP		P		RV/L	
THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000		DEPENDENT VARIABLE CP		P		RV/L	
X/L							
.027	-.4009	-.3781	-.3823	-.3994	-.4037	.3195	.4037
.050	-.4164	-.4425	-.4262	-.3567	.4727	.4037	.4727
.074	-.3404	-.3473	-.3325	-.3048	.5312	.4037	.5312
.098	-.3314	-.3570	-.3544	-.2025	.5495	.4037	.5495
.111	-.3252	-.3542	-.3823	-.2020	.5495	.4037	.5495
.139	-.3339	-.3576	-.4316	-.0368	.5495	.4037	.5495
.168	-.3611	-.3685	-.4050	-.0845	.5495	.4037	.5495
.191	-.3726	-.3808	-.3821	-.0845	.5495	.4037	.5495
.255	-.4027	-.4141	-.4235	-.1262	.5495	.4037	.5495
.344	-.4106	-.4130	-.4235	-.1262	.5495	.4037	.5495
.392	999.9999			-.1262	.5495	.4037	.5495
.667	-.5571	-.5687	-.5639	-.1420	.5495	.4037	.5495
.702	-.5714	-.5775	-.5612	-.1420	.5495	.4037	.5495
.724	-.5870	-.6067	-.5764	-.1420	.5495	.4037	.5495
.744	-.6089	-.6067	-.5764	-.1420	.5495	.4037	.5495
.755	-.6089	999.9999	-.7990	-.1420	.5495	.4037	.5495
.859	-.7616		-.7722	-.1420	.5495	.4037	.5495
.902	999.9999		-.7722	-.1420	.5495	.4037	.5495
.923	-.7757		-.9257	-.1420	.5495	.4037	.5495
.945	-.8411		-.9813	-.1420	.5495	.4037	.5495
.982	-.5843		-1.0715	-.1420	.5495	.4037	.5495

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11012)

MACH (4) = 1.198 ALPHA (1) = 110.000 Q(P5F) = 9.1400 PO = 22.000 P = 9.1000 RN/L = 6.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.4808	-.4762	-.4719	-.0370	-.5641
.050	-.4761	-.5270	-.4672	.0315	.6422
.074	-.4720	-.4756	-.4664	.0800	.7076
.098	-.4665	-.4878	-.4947	.1603	.7580
.111	-.5025	-.5111	-.5120	-.3525	.7751
.139	-.5249	-.5227	-.5152	-.2205	.9175
.168	-.5369	-.5385	-.5342	-.5506	.9675
.191	-.5426	-.5441	-.5380	-.1774	.9830
.255	-.5462	-.5420	-.5366	-.5566	.1209
.344	-.5580	-.5767	-.6137	-.1441	.4726
.392	999.9999	-.4587	-.4666	-.6163	.12383
.667	999.9999	-.4715	-.4695	-.4995	.12459
.702	-.4722	-.4883	-.4835	-.1515	.2898
.724	-.4955	-.4838	-.5045	-.2231	.12954
.744	-.4838	-.4967	-.5617	-.5725	.13424
.755	-.4916999.9999	-.5295	-.5295	-.1180	.3380
.869	-.5703	-.5557	-.5302	-.1457	.13160
.902	999.9999	-.5736	-.6157	.5093	.13253
.923	-.5858	-.5714	-.5276	.4519	.13922
.945	-.5577	-.5937	-.4677	.5175	.13155
.982	-.2831		-.5293	.6101	.13162
					.13878

MACH (5) = 1.967 ALPHA (1) = 110.000 Q(P5F) = 10.930 PO = 30.010 P = 4.0400 RN/L = 7.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.2515	-.2525	-.2503	.2839	.7727
.050	-.2546	-.2551	-.2340	.3371	.8407
.074	-.2536	-.2531	-.2176	.3737	.8957
.098	-.2578	-.2549	-.1887	.4349	.9503
.111	-.2504	-.2531	-.2055	.4550	.10417
.139	-.2519	-.2525	-.1400	.7066	.8747
.168	-.2531	-.2547	-.1319	.2009	.11747
.191	-.2556	-.2564	-.2530	.2202	.12203
.255	-.2638	-.2623	-.2632	.2287	.14159
.344	-.2712	-.2691	-.1247	.7681	.12314
.392	999.9999	-.2400	-.2812	.2408	.14259
.667	999.9999	-.2405	-.1215	.7565	.14366
.702	-.2425	-.2405	-.1360		.14425
.724	-.2458	-.2444	-.1400		.14465
.744	-.2360	-.2382	-.1647		.14730
.755	-.2376999.9999		-.1534		.14983
			-.2697		.1537
			-.2410		.15609
			-.1310		.16034
					.1120

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

DATE 07 MAR 77

STABILIZED SOURCE DATA. MSFC YMT 603 (5A28F)

WEEC TWT 603 (SABRE) 588 - CLEAN ATTACH AFT RING

[illegible]

SECTION 115RB

DEPENDENT VARIABLE CP

TRUTHA
.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible][illegible]

SECTION 115RB

DEPENDENT VARIABLE CP

THETA
.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0770	.0529	.0482	.4824	.9233	
	.050	.0615	.0501	.0473	.4695	.9461	
	.074	.0684	.0444	.0464	.4804	.9527	
	.098	.0567	.0407	.0425	.4218	.8655	
	.111	.0501	.0292	.1036	.2739	1.3253	.6609
	.139	.0454	.0302	.1060	.3631	1.5879	.8636
	.168	.0387	.0473	.1031	.3676	1.3836	.6012
	.191	.0369	.0558	.1014	.3549	1.3713	.5974
	.255	.0340	.0235	.1004	.8547	1.5898	.0900
	.344	.0283	.0548	.0995	.3620	1.5889	.0937
	.392	.0239	.0491	.0994		1.3623	.5760
	.667	.999	.0027	.0757	.8329	1.6069	.0833
	.702	.0036	.0409	.0795		1.4186	.0918
	.724	.0767	-.0029	.0416		.8304	.999
		.0046	.0019	.2302		.9214	.9999
		-.0019	.744	.4701		1.5614	.1449
	.755	-.002999	.9999	.3829		1.7851	.1231
				.1062		1.4097	1.6524

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (5A28F) (R11012)

MSFC TWT 603 (5A28F) SRB - CLEAN ATTACH AFT RING

MACH (B) = 4.450 ALPHA (I) = 110.000

SECTION (I) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP
.859	.0018	.0008	.0595	.7839	1.5925						
.902	.999.9999	.0018	.0444	.4502	.8484						
.923	.0074	.0122	.0985	.7839	1.6746						
.945	.0065	.0208	.0700	.6239	1.2821						
.982	.2009		.1060		1.6476						
										.0615	.0729

MSFC TWT 603 (ISA28F) SRB - CLEAN ATTACH AFT RING (R11014)

MACH (2) = .601 ALPHA (1) = 119.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

T-ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.5108	-.5666	-.5764	-1.8651	-1.4801	.4636	.7930	-1.9299
	.392				-1.4112			.7911	-1.9330
	.667	999.9999	-.4875		-1.6403	-.4348		.8331	-1.6835
	.702	-.4928	-.5281	-.6210	-1.6094	-1.3998	.5329	.8477	-1.8265
	.724	-.6101	-.5834	-.7279	-.7970	-1.5030	.0500	.7927	999.9999
	.744	-.5376	-.6098	-.7325	-1.0074	-1.3651	.5905	.9357	-1.0501
	.755	-.6133	999.9999	-.7947	-1.2258	-1.4086	.5081	.8723	-1.2447
	.869	-.8000	-.6046	-.2010		-.4159		.8481	
	.902	999.9999	-.6520	-.8035		-.6735		.9758	
	.923	-.6324	-.7364	-.1579		-.3170		.8455	-1.8175
	.945	-.6109	-.8241	-.15226		-.1581		.7641	-1.2323
	.982	-.4231		-.12086				1.0261	

MACH (3) = .904 ALPHA (1) = 119.900 O(PSF) = 7.3800 PO = 21.920 P = 12.910 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

T-ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.4147	-.4303	-.3221	-.5363			.0671			
	.050	-.3498	-.4123	-.5322	-.5254			.1381			
	.074	-.3412	-.3801	-.4890	-.4680			.1973			
	.098	-.3694	-.4030	-.4230	-.3704			.2300			
	.111	-.3831	-.4122	-.3345	-.5544	.0783	-.4530	.3909	-.4574	-.3294	
	.139	-.4076	-.4393	-.4753	-.5320	-.7606	.5016	.7350	-.0991	-.5551	-.4439
	.168	-.4463	-.4480	-.4814	-.5491	-.0337	.5719	.8013	-.0226	-.5059	-.4701
	.191	-.4672	-.4661	-.4891	-.5572	-.6166	.5874	.8220		-.5505	
	.255	-.4076	-.5052	-.5753	.0144			.8549			
	.344	-.4992	-.5213	-.6469	-.7133	-.6854	.6441	.8769	-.7036		
	.392			-.7160				.8852	-.9259		
	.667	999.9999	-.5260	-.5599	.0451			.9366	-.5504		
	.702	-.5300	-.5524	-.5625	-.6808		.7156	.9685	-.5895		
	.724	-.5829	-.5929	-.5899	-.6805	-.8291	.2327	.4340	999.9999		
	.744	-.5848	-.6004	-.6733	-.7930	-.6247	.8047	1.0605	-.6597		
	.755	-.6112	999.9999	-.6942	-.6577	-.6666	.7307	.9942	-.6456		
	.869	-.7946	-.7983	-.8050		.0834		.9964			
	.902	999.9999	-.8254	-.9482	-.1753			1.0446			
	.923	-.8469	-.8314	-.8782	.1482			1.0083	-.9195		
	.945	-.8169	-.8561	-.9738	.2237			.9444	-.9030		
	.982	-.5085		-.8159				1.1712			

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MACH (7) = 3.480 ALPHA (1) = 119.900 OIPSF = 6.8600 PO = 60.000 P = .81000 RN/L = 6.7000
 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11014)

SECTION (1) SRB DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.962
CP	-.0051	-.0469	-.0497	-.0536	-.0520	-.0531	-.0536	-.0542	-.0553	-.0570	-.0531	-.0650	-.0271	-.0655	-.0593	-.0599	-.0705	-.0717	-.0649	-.0718	-.2486
CP	-.0480	-.0497	-.0497	-.0536	-.0520	-.0531	-.0536	-.0542	-.0553	-.0570	-.0531	-.0650	-.0271	-.0655	-.0593	-.0599	-.0705	-.0717	-.0649	-.0718	-.2486
CP	-.0474	-.0424	-.0407	-.0435	-.0511	-.0433	-.0576	-.0610	-.0399	-.0393	-.0404	-.0359	-.0581	-.0029	-.0300	-.0373	-.0576	-.0237	-.0286	-.0142	-.1103
CP	.2230	.2642	.2835	.2537	.6556	.7250	.2598	.2993	.2968	.2976	.3032	.7225	.2760	.1091	.5832	.4059	.7496	.2610	.7013	.4961	
CP	.5313	.5944	.6181	.5533	1.0808	1.1592	1.1808	1.1592	1.1705	1.1587	1.1694	1.4156	1.2866	1.4017	1.6069	1.4467	1.4564	1.4912	1.0470	1.6964	
CP	.0049	.0325	.0365	.0347	.0049	.0325	.0365	.0347	.0351	.0356	.0411	.0036	.999	.9999	.1768	.1086		.0077	-.0023		

MACH (8) = 4.450 ALPHA (1) = 118.500 OIPSF = 4.0800 PO = 80.020 P = .29000 RN/L = 5.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755
CP	.1079	.0198	.1335	.0217	.0103	.0084	.0065	.0055	.0065	.0055	.0122	-.0095	.0748	-.0124	-.0143	-.0133
CP	.0131	.0141	.0103	.0084	.0065	.0055	.0055	.0055	.0065	.0055	.0122	-.0095	.0748	-.0124	-.0143	-.0133
CP	.0160	.0169	.0179	.0179	.0179	.0179	.0179	.0179	.0179	.0179	.0179	.0179	.0179	.0179	.0179	.0179
CP	.2805	.3108	.3288	.3043	.2852	.2652	.2317	.2326	.2307	.2307	.2307	.2307	.2307	.2307	.2307	.2307
CP	.5915	.6379	.6664	.6171	1.1214	1.2039	1.4021	1.2039	1.1935	1.1935	1.1935	1.3812	1.3812	1.3812	1.3812	1.3812
CP	.0492	.0757	.0776	.0785	.0492	.0757	.0776	.0785	.0492	.0757	.0776	.0785	.0492	.0757	.0776	.0785
CP	.0748	.0776	.0795	.0482	.999	.9999	.1980	.1373								

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH JFT RING (R11014)

MACH (8) = 4.450 ALPHA (1) = 118.500

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.869 -.0142
.902 999.9999
.923 -.0105
.945 -.0123
.982 .2502

-.0114
-.0124
-.0038
-.0065
.0511
.0226
.0691
.0278
.1345

.7036
.2701
.6739
.4654

1.3898
.5649
1.3879
.9953
1.6088

.0358
.0435

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STABLE ATED SOURCE DATA. MSFC TWT 603 (SA28F)

DATE 07 MAR 77

(R11015) (22 AUG 75)

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

PARAMETRIC DATA

PN-SCH =	2.000	PHI	•	.000
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RM/L • 6.3000

P. - 12.940

- 22.000

900 0(PSF) ■ 7.4100

SCALE 10000
MACH 1.1 = 905
ALPHA

SREF	=	116.2600	SQJ.T.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

REFERENCE DATA

DEPENDENT VARIABLE CP

SECTION () SRB

1471A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7/7

027	- 4214	- 4310	- 4036	- 5383	.0637
050	- 3512	- 4150	- 5274	- 5254	.1386
074	- 3785	- 3785	- 4898	- 4614	.1980
098	- 3694	- 3914	- 4210	- 3645	.2292
111	- 3935	- 4130	- 4504	- 5531	.2620
139	- 3818	- 4082	- 4505	- 4527	.7381
160	- 4089	- 4405	- 4662	- 7626	.5011
182	- 4432	- 4494	- 4783	- 6934	.8024
191	- 4602	- 4668	- 4925	- 6206	.8240
255	- 4831	- 4999	- 5720	.0158	.8564
344	- 5003	- 5200	- 6408	.6448	.8789
392	999, 9999	- 5200	- 8368	- 6847	.8860
667	- 5362	- 5551	- 5598	.0488	.9401
702	- 5868	- 5942	- 5619	- 6804	.9678
744	- 5855	- 5989	- 5909	- 8267	.4308
755	- 6077	999, 9999	- 7904	- 6152	.8043
869	- 7916	- 8024	- 6604	- 6700	.9941
902	999, 9999	- 8244	- 7891	.0860	.9986
923	- 8423	- 8282	- 9423	- 1794	.10480
945	- 8125	- 8440	- 9917	.1485	.10043
982	- 5071	- 8116	- 9490	.2276	.9444
					1.1728

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R:1016) (22 AUG 75)

REFERENCE DATA

SREF	=	116.2600	SO.FT.	XMRP	=	1044.0000	IN.
LREF	=	145.0000	IN.	YMRP	=	.0000	IN.
RREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

RN-SCH	-	2.000	PMI	-	.000
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PARAMETRIC DATA

MACH (1) = .399 ALPHA (1) = 130.100 O(PSF) = 3.1900 P0 = 32.040 P = 28.710 RN/L = 5.3000

SECTION (1) SRB

THE TA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 15.0000 17.5000 20.0000 22.5000 25.0000 27.5000 30.0000 32.5000 35.0000 37.5000 40.0000 42.5000 45.0000 47.5000 50.0000 52.5000 55.0000 57.5000 60.0000 62.5000 65.0000 67.5000 70.0000 72.5000 75.0000 77.5000 80.0000 82.5000 85.0000 87.5000 90.0000 92.5000 95.0000 97.5000 100.0000

0.27	-0.0918	-0.0857	-0.2333	-1.1587	-1.2450	-0.8179	-0.792	0.0948
0.50	-0.1622	-0.1394	-0.2898	-1.1587	-1.1449	-0.857	0.909	0.0856
0.74	-0.1838	-0.2197	-0.3935	-1.2852	-1.1900	-0.719	0.749	0.0749
0.98	-0.2185	-0.1722	-0.3480	-1.2814	-1.2103	-0.723	0.343	0.0343
1.11	-0.3059	-0.2443	-0.5043	-1.3311	-1.2892	-0.797	0.792	0.0948
1.39	-0.2788	-0.2661	-0.3440	-1.3535	-1.2635	-0.773	0.490	0.0856
1.68	-0.2432	-0.2411	-0.9557	-1.4912	-1.5935	-0.788	0.537	0.0788
1.91	-0.2506	-0.2778	-0.7404	-0.9780	-1.5935	-0.788	0.537	0.0788
2.55	-0.2710	-0.3663	-0.6379	-1.3013	-1.1226	-0.797	0.537	0.0788
3.44	-0.3648	-0.4184	-0.7647	-1.5001	-1.2638	-0.797	0.537	0.0788
3.92	995.9999	-0.3440	-0.5046	-1.5380	-1.5380	-0.717	0.537	0.6329
6.67	-0.3400	-0.4439	-0.5706	-1.7037	-1.7037	-0.773	0.5905	0.5905
7.02	-0.6557	-0.6394	-0.7217	-1.0979	-1.0979	-0.773	0.5905	0.5905
7.24	-0.3348	-0.3976	-0.7722	-1.0422	-1.0422	-0.773	0.5905	0.5905
7.55	-0.4277999	9.9999	-0.3559	-1.8349	-1.8349	-0.773	0.5905	0.5905
8.69	-0.4717	-0.5046	-0.3559	-1.8349	-1.8349	-0.773	0.5905	0.5905
9.02	999.9999	-0.5706	-0.7217	-1.0979	-1.0979	-0.773	0.5905	0.5905
9.23	-0.5216	-0.7217	-0.7722	-1.0422	-1.0422	-0.773	0.5905	0.5905
9.45	-0.5418	-0.7722	-0.3559	-1.8349	-1.8349	-0.773	0.5905	0.5905
9.82	-0.3559	-0.3559	-0.3559	-1.8349	-1.8349	-0.773	0.5905	0.5905

MACH (2) =	.606	ALPHA (1) =	130.100	C.PSF)	= 7.6100	P0	= 37.990	P	= 29.650	RM/L	= 8.8000
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SECTION () ISRB

THEIA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.25.0000 225.0000 270.0000 315.0000

x/L	1396	1393	1452	4818	0439
.027	-	-	-	-	-
.050	-	-	-	-	-
.057	-	-	-	-	-
.074	-	-	-	-	-
.098	-	-	-	-	-
.111	-	-	-	-	-
.139	-	-	-	-	-
.168	-	-	-	-	-
.191	-	-	-	-	-
.255	-	-	-	-	-

(R11016)

TABULATED SOURCE DATA, MSFC TNT 603 (SA28F)
MSFC TNT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

DATE 07 MAR 77

MACH (2) = .505 ALPHA (1) = 130.100

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 35.0000

X/L	.344	.392	.4613	.4505	.4490	.9905	-1.1064	.3574	.6134	-1.0027
	.667	.999	.9999	.4942	.4690	.9584	.3660	.6154	.6154	-.8761
	.702	.7036	.7008	.7008	.7626	-1.5720	-1.2267	.6917	.6917	-1.4936
	.744	.4004	.4448	.4448	.5642	-1.0973	-1.1248	.4031	.4031	-1.2204
	.755	.5489999	.9990	.9990	.6035	-1.3334	-1.2310	.2749	.2749	.999.9999
	.869	.5424			.5259	-1.6163		.583	.583	-.9468
	.902	.999.9999			.5779	-1.6925		.4160	.4160	-.1914
	.923	.5548			.7167	-1.0922		.6468	.6468	
	.945	.5761			.7732	.9099		.4330	.4330	-1.1345
	.982	.3229				.8250		.5038	.5038	-.6160
								.9468	.9468	

RN/L = 6.4000

P = 22.010

PO = 12.950

QIPSF = 7.4200

ALPHA (1) = 130.100

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 35.0000

X/L	.027	.2665	.2672	.3514	.3495	.2700	.4890	.0899	.5181	.3811	.3509
	.050	.2740	.2832	.3167	.3167	.3110	.5160	-.0346	.1797	.4520	-.3798
	.074	.3036	.3167	.3353	.3353	.3110	.4312	-.0007	.1336	.4877	-.4338
	.098	.3239	.3353	.3500	.3500	.3918	.4642	.0562	.1195	.5362	
	.111	.3385	.3500	.3699	.3699	.3939	.5066	.1195	.5181	.3811	.3509
	.139	.3552	.3717	.3894	.3894	.4513	.5164	.5530	.1797	.4520	-.3798
	.168	.3793	.3980	.4123	.4123	.5054	.5737	.6130	.1336	.4877	-.4338
	.191	.3993	.4159	.4299	.4299	.5545	.6473	.6327	.5362	.5362	
	.255	.4554	.4770	.4935	.4935	.5935	.6888	.6599	.5855	.5855	
	.344	.5066	.5135	.5135	.5135	.7076	.4802	.6771	.7108	.7108	
	.392	.5329	.5329	.5329	.5329	.7345	.0505	.6837	.7041	.7041	
	.667	.999.9999	.5329	.5565	.5565	.6462	.0505	.7270	.8185	.8185	
	.702	.5187	.5565	.6009	.6009	.7500	.5665	.7901	.999.9999	.999.9999	
	.724	.6084	.6009	.6009	.6009	.6726	.0320	.1798	.6813	.6813	
	.744	.5565	.6010	.6010	.6010	.6843	.7425	.9402	.7040	.7040	
	.755	.5829999.9999	.6381	.6381	.6381	.7271	.5887	.8149	.5887	.5887	
	.869	.7898	.8670	.8670	.8670	.8967	.0178	.7824	.7824	.7824	
	.902	.999.9999	.8047	.8047	.8047	.8967	.3768	.2490	.9961	.9961	
	.923	.7737	.7737	.7737	.7737	.9488	.1319	.6505	.9149	.9149	
	.945	.6792	.6927	.6927	.6927	.8931	.1085	.6695			
	.982	.4199	.5927	.5927	.5927	.8931	.1085	.6695			
						.5337		.11061			

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F) (R11016)

MACH (5) = 1.956 ALPHA (1) = 130.100 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

SECTION (1)SRB DEPENDENT VARIABLE CP THETA .0000 22.5020 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	CP	PO	P	RN/L
.869	-.2510	.5170	1.0983	
.902	-.2550	.0749	.3881	
.923	-.2620	.5693	1.1500	-.1262
.945	-.2635	.3379	.7310	-.2835
.982	-.2799	.1411	1.5213	

MACH (6) = 2.740 ALPHA (1) = 130.100 O(PSF) = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.0000

SECTION (1)SRB DEPENDENT VARIABLE CP THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	CP	PO	P	RN/L
.027	-.0804	.0872	.3271	
.050	-.0892	.1163	.3647	
.074	-.0958	.1285	.3708	
.098	-.0922	.1095	.3798	
.111	-.0988	.1671	.8272	.4947
.139	-.0982	.1907	.8691	.5445
.168	-.1041	.1899	.8758	.5366
.191	-.1059	.1831	.8631	.5360
.255	-.1083	.5293	1.0024	.0342
.344	-.1143	.1780	1.0097	-.0311
.392	-.0952	.0317	1.0236	-.0330
.657	-.1039	.1680	.8729	.999999
.702	-.1222	.1095	.2008	.1212
.724	-.1234	.0997	.2214	.0518
.744	-.1174	.1095	.17700	.1212
.755	-.1168	.0908	1.0662	.0532
.869	-.1234	.0621	1.2515	
.902	-.1265	.0832	.4567	
.923	-.1265	.0214	1.1333	-.0494
.945	-.1210	-.1168	.7105	-.1180
.982	-.2748	.1916	1.6073	

MSFC TWT 803 (5A28F) SRB - CLEAN ATTACH AFT RING (R11018)

MACH (7) =	3.480	ALPHA (1) =	130.100	Q(P5) =	6.8700	PO =	60.040	P =	.81000	BN/L =	6.7000
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SECTION 115RB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

MACH (8) =	4.450	ALPHA (1) =	130.100	Q(PSF) =	4.0800	PO	=	80.020	P	=	.29000	RN/L	=	5.80000
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SECTION 1158A

DEPENDENT VARIABLE CP

THE A
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

PAGE 6!

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R1101B)

MACH (8) = 4.450 ALPHA (1) = 130.100

SECTION 115R8 DEPENDENT VARIABLE CP

THE TA 0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11017) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .399 ALPHA (1) = 140.000 O(PSF) = 3.2000 PO = 32.030 P = 28.690 RN/L = 5.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0453	-.0319	-.0389	-.3101	-.0055
.050	-.0766	-.0703	-.0740	-.3823	-.0138
.074	-.1299	-.1082	-.1371	-.4362	-.0546
.098	-.2147	-.1747	-.2249	-.5601	-.1496
.111	-.3244	-.2186	-.2798	-.8140	-.3645
.139	-.2476	-.2429	-.2384	-.7533	-.3724
.168	-.2274	-.2645	-.2770	-.7232	-.3651
.191	-.2450	-.2681	-.2927	-.7689	-.3429
.255	-.2941	-.2902	-.2957	-.8013	-.3429
.344	-.3445	-.3478	-.3478	-.8478	-.3429
.392	-.3999	-.3107	-.3107	-.8463	-.3429
.667	-.9999	-.3107	-.3107	-.8463	-.3429
.702	-.2735	-.3541	-.3541	-.8463	-.3429
.724	-.5758	-.5586	-.5586	-.8463	-.3429
.744	-.2971	-.3270	-.3270	-.8463	-.3429
.755	-.3477	-.9999	-.9999	-.8463	-.3429
.869	-.4042	-.4569	-.4569	-.8463	-.3429
.902	-.9999	-.5048	-.5048	-.8463	-.3429
.923	-.4098	-.6852	-.6852	-.8463	-.3429
.945	-.4027	-.6502	-.6502	-.8463	-.3429
.982	-.3030	-.5578	-.5578	-.8463	-.3429

MACH (2) = .601 ALPHA (1) = 140.000 O(PSF) = 7.5300 PO = 37.980 P = 29.750 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0694	-.0629	-.0692	-.3148	-.0155
.050	-.1079	-.1056	-.1055	-.3739	-.0325
.074	-.1591	-.1778	-.1933	-.4089	-.0696
.098	-.2362	-.2220	-.2720	-.5251	-.1766
.111	-.3389	-.2468	-.2315	-.8039	-.3714
.139	-.2639	-.2821	-.2711	-.8552	-.8034
.168	-.2881	-.2970	-.3021	-.7888	-.3396
.191	-.3076	-.3014	-.3075	-.7648	-.3396
.255	-.3442	-.3182	-.3030	-.7678	-.3134
					-.5975
					-.2594
					-.2742
					-.2983
					-.6443
					-.4095

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11017)

MACH (2) = .601 ALPHA (1) = 140.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	.3951	.3870	.3855	.7788	.8057	.2202	.4138	.8303
.392	999.9999	.2917			.7255			.4163	.7396
.702	.3244	.2674		.4807	.8790	.7590	.3179	.4575	.9832
.724	.5770	.4808		.5791	.6392	.10396	.4303	.1533	.9136
.744	.3253	.3570		.3360	.6503	.5895	.5263	.7056	999.9999
.755	.4070	999.9999		.3970	.7891	.7850	.3074	.5366	.6670
.869	.4183				.13757			.4468	.8533
.902	999.9999	.5630			.8904			.2249	
.923	.4209	.6008			.8690			.5595	.9388
.945	.4250	.9516			.8919			.4348	.9130
.982	.2813	.6207			.5670			.8730	

MACH (3) = .911 ALPHA (1) = 140.000 QIPSF = 7.4700 PO = 22.010 P = 12.870 RN/L = 6.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0764	.0691	.0629	.1528	.0148	.3709	.4864
.050	.1527		.1516	.1437	.2198	.0717	.5145	.3837
.074	.2608	.2726	.3025	.3025	.3267	.1350	.1940	.3734
.098	.3824	.3574	.4352	.4352	.4460	.5981	.5579	
.111	.4808	.4306	.3634	.3634	.4784	.0213	.4884	
.139	.3504	.3691	.5217	.5217	.2208	.3762	.2234	
.168	.3670	.4394	.3791	.5478	.2573	.4241	.5766	
.191	.3901	.4781	.4006	.4930	.1842	.4311	.5766	
.255	.4342	.5867	.5867	.5472	.2634	.4422	.5579	
.304	.4279	.44300	.4456	.8702	.2946	.4543	.7738	
.392				.7466	.4593	.6771	.7738	
.667	999.9999	.3354		.1277	.4874	.10163	.7912	
.702	.3515	.3628	.4835	.7759	.4357	.6255	.999.9999	
.724	.4844	.4569	.5726	.5726	.3298	.2217	.5465	
.744	.3515	.4213	.4362	.5131	.6757	.8270	.5465	
.755	.4326	999.9999	.4842	.6222	.4339		.5740	
.869	.4828		.10497		.5450			
.902	999.9999	.6437	.6872	.0526	.5450			
.923	.4902	.5706	.6872	.4607	.0375		.8234	
.945	.4788	.6007	.7961	.7961	.6939		.7864	
.982	.2401	.6181	.7730	.2932	.0993			
					1.0313			

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11017)

MACH (4) =	1.201	ALPHA (1) =	140.000	Q(PSSF) =	9.1500	P0 =	22.000	P =	9.0500	RN/L =	6.7000
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SECTION : 11SRB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 35.0000 57.5000 80.0000 225.0000 270.0000 315.0000

71X

027	- 3234	- 3274	- 3293	- 4317	- 2052
050	- 3728	- 3626	- 3812	- 4571	- 1523
074	- 4091	- 4148	- 4180	- 4338	- 1413
098	- 4580	- 4352	- 4585	- 5022	- 2746
111	- 4788	- 4634	- 4621	- 1115	- 3296
139	- 4450	- 4508	- 4516	- 3746	- 5171
168	- 4328	- 4363	- 4519	- 0533	- 4164
191	- 4285	- 4227	- 4767	- 3596	- 5440
255	- 4190	- 4217	- 4399	- 0582	- 5516
344	- 3637	- 3596	- 4111	- 3496	- 5418
362	999, 9999	- 4138	- 4343	- 1151	- 4198
667	- 3466	- 4075	- 4469	- 2161	- 5458
702	- 5120	- 5056	- 4817	- 5378	- 4255
724	- 3631	- 4330	- 4444	- 0353	- 4925
755	- 4086999, 9999	- 4570	- 5384	- 1823	- 5925
869	- 5300	- 5564	- 5976	- 2363	- 999, 9999
902	999, 9999	- 5262	- 6129	- 1331	- 1452
923	- 5516	- 6519	- 4780	- 3232	- 9057
945	- 5785	- 6143	- 7165	- 0568	- 10319
982	- 1134	- 0482	- 0482	- 2040	- 8183
				- 1271	- 7239
				- 2065	- 5519
				- 8190	- 4731
				- 2040	- 4875
				- 12171	- 4669
					- 1188
					- 0252
					- 0386
					- 4556
					- 4940
					- 4875
					- 4669
					- 4467
					- 4255
					- 4925
					- 5925
					- 999, 9999
					- 4767
					- 5504
					- 5519
					- 7370

MACH (5) =	1.978	ALPHA (1) =	140.000	Q(PSF) =	10.870	P0	=	30.010	P	=	3.9700	RN/L	=	7.3000
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SECTION : 1)SRB

DEPENDENT VARIABLE CP

1451A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

7/1X

[illegible]

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

PAGE 65

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11017)

MACH (5) = 1.978 ALPHA (1) = 140.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.869	-.2354	-.2464	-.1888	.3492	.7093
.902	999.9993	-.2604	-.2258	-.0327	.1475
.923	-.2663	-.2762	-.1722	.3928	.7988
.945	-.2735	-.2837	-.2724	.0917	.4112
.982	.2083		.2486		1.4750

- .1816
- .2683

MACH (6) = 2.740 ALPHA (1) = 140.000 Q1PSF = 6.3700 PO = 30.010 P = 1.2100 RN/L = 4.9000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.027	-.0641	-.1192	-.1253	-.0129	.1318
.050	-.1174	-.1204	-.1259	.0052	.1528
.074	-.0496	-.1234	-.1265	.0155	.1576
.098	-.1174	-.1252	-.1271	.0181	.1510
.111	-.1247	-.1259	-.1277	.0914	.6526
.139	-.1271	-.1289	-.1325	.1084	.6872
.169	-.1295	-.1301	-.1356	.3508	.5870
.191	-.1270	-.1277	-.1338	.3550	.5949
.255	-.1319	-.1326	-.1338	.1161	.5882
.344	-.1307	-.1271	-.1326	.3562	.6908
.392			-.0614	.6100	.7054
.667	999.9999	-.1191	-.0633	.7103	.7147
.702	-.1265	-.0823	-.0658	.3726	.7426
.724	-.1277	-.1283	-.0779	.6506	.7426
.744	-.1174	-.1143	-.0987	.1030	.1060
.755	-.1186999.9999		-.1241	.3629	.4937
.869	-.1228	-.1264	-.1228	.2406	.7710
.902	999.9999	-.1332	-.0718	.3725	.7652
.923	-.1338	-.1374	-.0985	.0668	.2186
.945	-.1343	-.1435	-.0621	.3605	.7109
.982	.2959		-.1277	.1518	.3975
			.3016		1.3947

.3202 - .0809 - .1271
 .3526 - .0845 - .1277
 .3550 - .0621 - .1307
 - .0615
 - .0651
 - .0651
 - .0553
 - .0663
 999.9999
 .0337
 - .0008

- .0815
- .1265

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R.1017)

MACH (7) =	3.480	ALPHA (1) =	140.000	Q(PSF) =	6.8700	P0 =	60.050	P =	.81000	RN/L =	6.7000
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SECTION () SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	0.405	-0.0506	-0.0562	0.0203	0.1431
0.50	-0.0489	-0.0517	-0.0585	0.0366	0.1645	-0.0545
0.74	-0.0421	-0.0535	-0.0602	0.0479	0.1727	-0.0528
0.98	-0.0477	-0.0556	-0.0619	0.0541	0.1755	-0.0562
1.11	-0.0506	-0.0539	-0.0562	0.0517	0.1755	-0.0545
1.39	-0.0506	-0.0529	-0.0551	0.0517	0.1755	-0.0528
1.68	-0.0535	-0.0517	-0.0563	0.0517	0.1755	-0.0562
1.91	-0.0551	-0.0500	-0.0557	0.0517	0.1755	-0.0562
2.55	-0.0562	-0.0619	-0.0619	0.0517	0.1755	-0.0562
3.44	-0.0574	-0.0534	-0.0545	0.0517	0.1755	-0.0562
3.92	999.9999	-0.0669	-0.0669	0.0517	0.1755	-0.0562
6.67	999.9999	-0.0557	-0.0618	0.0517	0.1755	-0.0562
7.02	-0.0652	-0.0688	-0.0652	0.0517	0.1755	-0.0562
7.24	-0.0664	-0.0688	-0.0652	0.0517	0.1755	-0.0562
7.44	-0.0662	-0.0688	-0.0652	0.0517	0.1755	-0.0562
7.55	-0.067999.9999	-0.0675	-0.0675	0.0517	0.1755	-0.0562
8.69	-0.0658	-0.0697	-0.0658	0.0517	0.1755	-0.0562
9.02	999.9999	-0.0731	-0.0731	0.0517	0.1755	-0.0562
9.23	-0.0692	-0.0714	-0.0714	0.0517	0.1755	-0.0562
9.45	-0.0714	-0.0748	-0.0748	0.0517	0.1755	-0.0562
9.82	3200	-0.0748	-0.0748	0.0517	0.1755	-0.0562

MACH (8) =	4.450	ALPHA (1) =	140.000	Q(PSE) =	4.0800	P0	=	80.030	P	=	.29000	RM/L	=	5.7000
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SECTION 115RB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

[illegible]

DATE 07 MAR 77
TABULATED SOURCE DATA, MSFC TNT 603 (SA28F)
MSFC TNT 603 (SA28F) SPR - CLEAN ATTACH AFT RING (R11017)

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

IR1101E (22 AUG 75)

REFERENCE DATA

SREF = 116.2500 SQ.FT. XMRP = 1044.0000 IN.
 IREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .399 ALPHA (1) = 149.000 Q(PSF) = 3.2000 PO = 32.020 P = 28.690 RN/L = 5.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0142	.0157	.0196	-.1585	-.0145
.050	.0283	-.0216	-.0722	-.0202	-.2447	-.0573
.074	-.0828	-.0722	-.1433	-.0800	-.3335	-.1235
.098	-.2040	-.1433	-.2478	-.1823	-.4974	-.2706
.111	-.3835	-.3305	-.2171	-.5320	-.8668	-.5768
.139	-.2187	-.2171	-.2041	-.4674	-.0021	-.1269
.168	-.2124	-.2349	-.2108	-.4989	-.0752	-.4881
.191	-.2150	-.2338	-.2203	-.5322	-.0890	-.2503
.255	-.2342	-.2563	-.2429	-.5535	-.2447	-.2278
.344	-.2675	-.2563	-.2868	-.5535	-.1026	-.2478
.352	.999.9999	-.1532	-.1532	-.5955	-.2397	-.6268
.667	.999.9999	-.1532	-.1532	-.5955	-.2397	-.5914
.702	-.1682	-.2471	-.4690	-.6781	-.2271	-.6469
.724	-.5070	-.4584	-.6134	-.6502	-.3712	-.6171
.744	-.1246	-.2049	-.3280	-.4773	-.4572	999.9999
.755	-.2194	.999.9999	-.4068	-.5323	-.2239	-.3786
.869	-.4133	-.5615	-.9728	-.5136	-.2912	-.5934
.902	.999.9999	-.4349	-.7341	-.5785	-.2641	-.2912
.923	-.3913	-.4461	-.7279	-.0987	-.5663	-.7746
.945	-.3588	-.5129	-.6635	-.9559	-.1.0395	-.6736
.982	-.1736	-.5748	-.5748	-.8313	-.8313	

MACH (2) = .603 ALPHA (1) = 149.000 Q(PSF) = 7.5600 PO = 37.980 P = 29.710 RN/L = 8.9000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0180	.0227	.0272	-.1190	-.0106
.050	-.0307	-.0267	-.0267	-.0205	-.2201	-.0603
.074	-.0999	-.0873	-.0873	-.0926	-.3099	-.1296
.098	-.2441	-.1913	-.1913	-.2896	-.5056	-.2994
.111	-.4209	-.3957	-.3279	-.3949	-.8424	-.5647
.139	-.2252	-.2429	-.2470	-.4693	-.6408	-.8184
.168	-.2245	-.2523	-.2419	-.4850	-.0075	-.1332
.191	-.2280	-.2525	-.2285	-.5517	-.0737	-.2833
.255	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.352	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.667	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.702	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.724	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.744	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.755	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.869	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.902	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.923	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.945	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412
.982	-.2488	-.2636	-.2285	-.5513	-.0921	-.2412

(R11018)

TABULATED SOURCE DATA. MSFC TH1 603 (SA28F)

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (2) = .603 ALPHA (1) = 149.000

SECTION 115RB

DEPENDENT VARIABLE CP

THEIA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	- .2915	- .2837	- .3040	- .6074	- .5765	- .1080	.2459	- .6339
.344				- .5694			.2471	- .5851
.392				- .8025			.2858	- .6656
.667				- .7094		.2194	.4129	- .6330
.702				- .5334			- .4618	999.9999
.724				- .6505		.6894	.6092	- .4115
.744				- .3621		.4977	.3945	- .6137
.755				- .4248		.2309	.2946	
.809				- .9616			.1839	
.902				- .7281			.5675	- .7471
.923				- .6915			.9144	- .6185
.945				- .6342			.8406	
.969				- .7034				
.982								

MACH (3) =	903	ALPHA (1) =	149.000	0 (PSE) =	7.4000	PO	=	22.010	P	=	12.980	RN/L	=	6.4000
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SECTION 11 SRB

DEPENDENT VARIABLE CP

YHFA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

[illegible]

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R1101018)

MACH (4) = 1.191 ALPHA (1) = 148.000 Q(PSF) = 9.1200 PO = 22.010 P = 9.1900 RN/L = 6.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																																																																																																																																																																																																																																																																																												
0.27	-	2630	-	2697	-	2764	-	2831	-	2898	-	2965	-	3032	-	3099	-	3166	-	3233	-	3300	-	3367	-	3434	-	3501	-	3568	-	3635	-	3702	-	3769	-	3836	-	3903	-	3970	-	4037	-	4104	-	4171	-	4238	-	4305	-	4372	-	4439	-	4506	-	4573	-	4640	-	4707	-	4774	-	4841	-	4908	-	4975	-	5042	-	5109	-	5176	-	5243	-	5310	-	5377	-	5444	-	5511	-	5578	-	5645	-	5712	-	5779	-	5846	-	5913	-	5980	-	6047	-	6114	-	6181	-	6248	-	6315	-	6382	-	6449	-	6516	-	6583	-	6650	-	6717	-	6784	-	6851	-	6918	-	6985	-	7052	-	7119	-	7186	-	7253	-	7320	-	7387	-	7454	-	7521	-	7588	-	7655	-	7722	-	7789	-	7856	-	7923	-	7990	-	8057	-	8124	-	8191	-	8258	-	8325	-	8392	-	8459	-	8526	-	8593	-	8660	-	8727	-	8794	-	8861	-	8928	-	8995	-	9062	-	9129	-	9196	-	9263	-	9330	-	9397	-	9464	-	9531	-	9598	-	9665	-	9732	-	9799	-	9866	-	9933	-	10000	-	10067	-	10134	-	10201	-	10268	-	10335	-	10402	-	10469	-	10536	-	10603	-	10670	-	10737	-	10804	-	10871	-	10938	-	11005	-	11072	-	11139	-	11206	-	11273	-	11340	-	11407	-	11474	-	11541	-	11608	-	11675	-	11742	-	11809	-	11876	-	11943	-	12010	-	12077	-	12144	-	12211	-	12278	-	12345	-	12412	-	12479	-	12546	-	12613	-	12680	-	12747	-	12814	-	12881	-	12948	-	13015	-	13082	-	13149	-	13216	-	13283	-	13350	-	13417	-	13484	-	13551	-	13618	-	13685	-	13752	-	13819	-	13886	-	13953	-	14020	-	14087	-	14154	-	14221	-	14288	-	14355	-	14422	-	14489	-	14556	-	14623	-	14690	-	14757	-	14824	-	14891	-	14958	-	15025	-	15092	-	15159	-	15226	-	15293	-	15360	-	15427	-	15494	-	15561	-	15628	-	15695	-	15762	-	15829	-	15896	-	15963	-	16030	-	16097	-	16164	-	16231	-	16298	-	16365	-	16432	-	16499	-	16566	-	16633	-	16700	-	16767	-	16834	-	16901	-	16968	-	17035	-	17102	-	17169	-	17236	-	17303	-	17370	-	17437	-	17504	-	17571	-	17638	-	17705	-	17772	-	17839	-	17906	-	17973	-	18040	-	181

MACH (5) =	(.970	ALPHA (1) =	149.000	O(PSF) =	10.920	P0	=	30.020	P	=	4.0200	RN/L	=	7.4000
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SECTION 115RB

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369</
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(R11018)

TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)
MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

DATE 07 MAR 77

MACH (5) = 1.978 ALPHA (1) = 149.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.2233	-.2448	-.1849	.2115	.4500
.902	999.9999	-.2520	-.2471	-.0768	.0241
.923	-.2548	-.2671	-.1699	-.1929	.5193
.945	-.2634	-.2962	-.2598	-.0852	.0525
.982	.1709		.0131		1.1362

-.2060
-.2628

MACH (6) = 2.740 ALPHA (1) = 149.020 QIPSF = 5.3700 PO = 30.000 P = 1.2100 RN/L = 4.9000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0919	-.0973	-.0997	-.0772	.0058
.050	-.0997	-.1010	-.1028	-.0664	.0180
.074	-.1016	-.1064	-.1064	-.0596	.0204
.098	-.1058	-.1082	-.1095	-.0536	.0240
.111	-.1095	-.1112	-.1070	.0204	.3913
.139	-.1058	-.1095	-.1064	-.0858	.3360
.168	-.1083	-.1070	-.1058	-.0869	.3556
.191	-.1070	-.1034	-.1034	-.0870	.3617
.255	-.1064	-.1058	-.0876	.0309	.3556
.344	-.1010	-.1015	-.0857	.0337	.4235
.392	999.9999	-.1186	-.0845	.2284	.4291
.667	-.1192	-.1240	-.0985	.0289	.4290
.702	-.1325	-.1350	-.1277	-.0785	.4777
.724	-.0961	-.1028	-.1156	.2190	.4771
.744	-.1015999.9999	-.1107	-.0439	.1182	.0325
.755	-.1070	-.1180	-.0559	.2350	.9581
.869	999.9999	-.1277	-.1137	.0155	.5584
.902	-.1167	-.1276	-.0620	.2548	.4352
.923	-.1271	-.1356	-.1149	-.0176	.0923
.945			-.2439		.4449
.982					.1443

.1786
.1980
.2020
-.0912
-.0888
-.0875
-.0876
999.9999
-.0099
-.0390
-.0743
-.1089
1.0983

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 74

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11019) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .400 ALPHA (1) = 160.000 Q(PSF) = 3.2100 P0 = 32.040 P = 28.700 RN/L = 5.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0685	.0773	.0737	.0281	.0219
.050	.0303	.0404	.0398	-.0678	-.0447
.074	-.0309	-.0099	-.0240	-.1723	-.1319
.098	-.1651	-.1245	-.1539	-.3916	-.3351
.111	-.3459	-.3264	-.2639	-.7746	-.8134
.139	-.1394	-.1532	-.1490	-.3192	-.2913
.168	-.1252	-.1363	-.1319	-.2810	-.2847
.191	-.1308	-.1281	-.1301	-.2768	-.2654
.255	-.1267	-.1179	-.2887	-.1225	.0980
.344	-.1346	-.1371	-.1760	-.2702	.0428
.392	.999.9999	-.0564	-.3178	.3264	-.1009
.667	.999.9999	-.0564	-.2125	-.0511	.0964
.702	-.0533	-.1351	-.2333	-.2413	.1514
.724	-.3386	-.3517	-.3637	-.4730	-.3401
.744	-.0522	-.0495	-.0240	-.5111	-.5805
.755	-.0806	.999.9999	-.1521	-.2132	-.2153
.869	-.4413	-.4880	-.5111	-.0456	.1945
.902	.999.9999	-.5015	-.5220	-.1854	.0707
.923	-.4381	-.4971	-.4807	-.4834	-.4046
.945	-.4056	-.4695	-.5149	-.7509	-.7876
.982	-.3866		-.5635	-.7209	-.7209

MACH (2) = .601 ALPHA (1) = 160.000 Q(PSF) = 7.5300 P0 = 38.010 P = 29.780 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0605	.0662	.0745	.0339	.0291
.050	.0104	.0275	.0393	-.0522	-.0339
.074	-.0527	-.0327	-.0299	-.1529	-.1285
.098	-.1865	-.1439	-.2201	-.4094	-.3663
.111	-.3632	-.2958	-.3084	-.7524	-.8017
.139	-.1681	-.1676	-.1757	-.3256	-.2093
.168	-.1397	-.1532	-.1535	-.2943	-.0869
.191	-.1300	-.1481	-.1409	-.2879	-.0929
.255	-.1270	-.1320	-.2861	.0175	.0790
			-.2965	-.1223	.0937

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

PAGE 75

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RINO (R11018)

MACH (2) = .601 ALPHA (1) = 160.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	-.1524	-.1598	-.0909	-.1666	-.3597	-.1046	-.1260	-.4538	-.4660	-.4063	-.3878	-.3601
	-.1923	-.3220	-.2811	-.3072	-.5207	-.1309	-.2435	-.4737	-.4700	-.4468	-.5125	-.5265
	.0299	.0933	-.0491	.2385	-.5442	.4956	.2313	-.0505	-.2654	-.5289	-.7146	-.5810
	.0963	.1555	.3534	.5691	.2867	.2035	.0110	.5289	.7146	.5810	.4441	.4821
	.3332	.3153	.3299	.999.9999	.0337	.2356						

MACH (3) = .907 ALPHA (1) = 160.000 Q(PSF) = 7.4400

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

RV/L = 6.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	.0137	.0432	.1114	.2401	.3731	.1788	.1514	.1401	.1372	.1729	.1740	.3195	.4343	.2555	.2445	.2796	.3709	.999.9999	.3266	.3006
	.0314	.0787	.3261	.4667	.4771	.3096	.2848	.2719	.2550	.2670	.3189	.4202	.4960	.1124	.2863	.3400	.3723	.4569	.5471	.4235
	.0240	.0852	.2977	.4346	.3463	.1194	.1004	.0999	.0999	.0464	.0978	.1671	.5135	.5800	.3233	.1035	.3862	.4898	.5362	
	.0234	.0890	.2754	.6445	.1711	.0887	.1131	.1152	.1069	.0978	.1079	.1671	.0972	.6237	.3821	.1342	.3352	.4992	.5444	.0259
	.3628	.4731	.3871	.2096	.032	.0559	.0562	.0562	.0464	.1377	.5135	.5800	.3233	.1035	.3862	.4898	.5362	.4511	.5619	

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC INT 503 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11019)

MACH (4) = 1.202 ALPHA (1) = 160.000 O(PSF) = 9.1500 PO = 22.010 P = 9.0600 RN/L = 6.8000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.027	-.0214	-.0189	-.0020	.0053	.0228											
.050	-.0772	-.0805	-.1250	-.1584	-.3209											
.074	-.1840	-.1729	-.3136	-.4659	-.3763											
.098	-.5310	-.4660	-.5694	-.5325	-.4860											
.111	-.2142	-.2745	-.2397	-.2086	-.1615	-.0020	-.1037	-.1399	-.2455	-.3029						
.139	-.0707	-.0999	-.0756	-.0963	-.1443	.0293	-.1374	-.1394	-.1026	-.1195						
.168	-.0693	-.0936	-.0873	-.1302	-.2884	.0344	-.1506	-.1506	-.1374	-.1233						
.191	-.0772	-.1002	-.1176	-.1852	-.3349	.0192	.0814		-.1446							
.255	-.1148	-.1650	-.1176	-.2736	-.1332	.0748										
.344	-.0961	-.0935	-.1564	-.2016	-.1224	.1379			-.2865							
.392				-.1361		.1960			-.1546							
.667	999.9999	-.2111	-.4086	-.4086	-.1026	.1112			-.3984							
.702	-.1625	-.2146	-.3986	-.4384	-.3967	.0473	.0786		-.4305							
.724	-.3477	-.3743	-.4340	-.4853	-.4951	-.4854	-.4991	999.9999								
.744	-.0811	-.1082	-.2029	-.1260	.1747	.6896	.7295		-.1104							
.755	-.1218	999.9999	-.1974	-.2142	.0168	.4398	.4945		-.2057							
.869	-.3332		-.3020		.0608	.2400										
.902	999.9999	-.3499	-.3738		-.3638	-.2946			-.4068							
.923	-.3355	-.3526	-.3901		-.0808	.0934			-.4771							
.945	-.3278	-.3484	-.4620		-.5483	-.5063										
.982	-.1620		-.2613			.3049										

MACH (5) = 1.965 ALPHA (1) = 160.000 O(PSF) = 10.940 PO = 30.010 P = 4.0500 RN/L = 7.4000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.027	-.1308	-.1348	-.1091	-.0977	-.1566											
.050	-.2200	-.2157	-.1884	-.1866	-.1679											
.074	-.2435	-.2416	-.2362	-.2270	-.1607											
.098	-.2419	-.2667	-.2663	-.2298	-.1664											
.111	-.1221	-.1922	-.1979	-.1380	-.0100	.0983	-.1352	-.0210	-.1785	-.1809						
.139	-.1008	-.1331	-.1536	-.1910	-.1256	.1125	.1551	.0040	-.1704	-.1573						
.168	-.0966	-.1231	-.1606	-.1995	-.1192	.1362	.1719	.0072	-.1868	-.1651						
.191	-.0984	-.1143	-.1683	-.2139	-.1200	.1242	.1673		-.2026							
.255	-.1130		-.2002	-.2139	.0252	.1577										
.344	-.0971	-.0956	-.1164	-.1281	.1182	.1543			-.1343							
.392			-.0515	-.0793		.1628			-.0603							
.667	999.9999	-.1534	-.2178	.0210		.1781			-.2142							
.702	-.1132	-.1457	-.2266	-.1172	.1217	.1531			-.2241							
.724	-.2369	-.2357	-.2545	-.2410	-.1837	.1849			999.9999							
.744	-.0150	-.0914	-.1501	.1330	.5428	.5842			-.0794							
.755	-.0812	999.9999	-.1353	-.1208	.0040	.1789	.2187		-.1356							

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11019)

MACH (5) = 1.965 ALPHA (1) = 160.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 360.0000

X/L	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP
.869	-.1732	-.2078	-.1537	.0907	.2047							
.902	999.9999	-.2117	-.2397	-.1488	-.0991							
.923	-.2209	-.2397	-.1576	.0786	.2037							
.945	-.2277	-.2521	-.2673	-.1766	-.1199							
.982	.0270		.0415		.4614							

-.1719
-.2624

MACH (6) = 2.740 ALPHA (1) = 160.000 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RN/L = 5.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 360.0000

X/L	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP
.027	-.0706	-.0779	-.0785	-.0767	-.0815							
.050	-.0924	-.0961	-.0998	-.1060	-.0797							
.074	-.0919	-.1058	-.1113	-.1077	-.0773							
.098	-.1015	-.1125	-.1149	-.1041	-.0712							
.111	-.0858	-.0937	-.0955	-.0457	.1267							
.139	-.0791	-.0900	-.0875	-.0384	.1376							
.168	-.0791	-.0920	-.0898	-.0402	.1388							
.191	-.0773	-.0920	-.0900	-.0383	.1352							
.255	-.0688	-.0882	-.0876	.0564	.1716							
.344	-.0542	-.0712	-.0761	.1421	.1758							
.392	999.9999	-.0841	-.0961	.0690	.1759							
.667	-.0724	-.0815	-.1046	.1516	.1786							
.702	-.1192	-.1216	-.1046	-.0609	.1734							
.724	-.0084	-.0494	-.0773	-.0591	.1022							
.744	-.0402	999.9999	-.0706	.5190	.0993							
.755	-.0750	-.0955	-.0542	.1167	.0093							
.869	999.9999	-.1089	-.1077	-.0506	-.0469							
.902	-.1034	-.1119	-.0518	-.0939								
.923	-.1144	-.1248	-.1101	-.0427								
.945			.1510									
.982												

.0410
.0556
.0544
.0894

.1004
-.0888
-.0882
-.0834

.1267
.1376
.1388
.1352

.0457
.0384
.0402
.0383

.0955
-.0858
-.0821
-.0882

-.0779
-.0773
-.0791
-.0791

-.0706
-.0920
-.0920
-.0920

-.0706
-.0706
-.0706
-.0706

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11019)

MACH (7) = 3.480 ALPHA (1) = 160.000 Q (PSF) = 5.9500 PO = 59.980 P = .91000 RN/L = 5.7000

SECTION () SRB DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.55	3.44	3.92	667	702	724	744	755	869	902	923	945	982
	-.0114	-.0240	-.0177	-.0262	-.0321	-.0305	-.0345	-.0362	-.0328	-.0227	-.0172	-.0458	-.0335	-.0610	-.0094	-.0171999	-.0300	999	999	945	982
	-.0270	-.0322	-.0379	-.0418	-.0480	-.0430	-.0441	-.0300	-.0268	-.0435	-.0213	-.0481	-.0404	-.0341	-.0362	-.0334	-.0458	-.0548	-.0537	-.0621	-.0621
	-.0362	-.0401	-.0469	-.0480	-.0385	-.0322	-.0300	-.0254	-.0305	-.0328	-.0306	-.0446	-.0531	-.0593	-.0122	-.0125	-.0171	-.0509	-.0086	-.0480	-.0480
	-.0424	-.0503	-.0492	-.0432	-.0032	-.0067	-.0000	-.0099	-.0099	-.0140	-.0154	-.0842	-.0081	-.0441	-.0509	-.0555	-.0197	-.0126	-.0917	-.0065	-.0065
	-.0374	-.0390	-.0373	-.0250	-.1593	-.1537	-.1550	-.1852	-.1869	-.1542	-.1902	-.1778	-.1494	-.0120	-.4862	-.2031	-.2020	-.0127	-.1367	-.0490	-.4789

MACH (8) = 4.450 ALPHA (1) = 160.000 Q (PSF) = 4.0800 PO = 80.040 P = .29000 RN/L = 5.8000

SECTION C 11SRB

THEIA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

X/L	0.074	0.072	0.092	0.216	0.188
.027	.0704	.0472	.0292	.0216	.0188
.050	.0679	.0443	.0263	.0140	.0283
.074	.0685	.0357	.0216	.0161	.0103
.098	.0367	.0310	.0207	.0122	.0226
.111	.0359	.0292	.0387	.0818	.1847
.139	.0433	.0197	.0377	.1021	.1618
.168	.0357	.0140	.0504	.1098	.1988
.191	.0320	.0140	.0423	.1098	.1739
.255	.0292	.0472	.0471	.0744	.2035
.344	.0263	.0152	.0490	.0632	.1704
.392	.0253	.0501	.0395	.0764	.2017
.667	.9999	.0557	.0358	.0837	.1722
.702	.0008	.0057	.0378	.0892	.2013
.724	.0029	.0215	.0093	.0150	.1715
.744	.0235	.0419	.0036	.0292	.1601
.755	.0123999	.0008	.0017	.0065	.999
			.0207	.1278	.0255
			.0168	.0672	.4121
				.1876	.2197
					.0292
					.0320
					.0273
					.0235
					.0001
					.0218
					.0036
					.0038
					.999
					.0254
					.0197

DATE 07 MAR 77 TABULATED SOURCE DATA. MSFC TWT 603 (SA28F) (R11019)
 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (8) = 4.450 ALPHA (1) = 160.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.869	.0103	.0000	.0161	.1146	.1968						
.902	.999	.0048	.0018	.0207	.0499						
.923	.0047	.0046	.0387	.0802	.1098					.0292	
.945	.0000	.0001	.0121	.0453	.0755					.0169	
.982	.1762		.1990		.4766						

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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(R11020) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

REFERENCE DATA

SREF = 115.2500 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 2.740 ALPHA (1) = 160.000 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RN/L = 4.9000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0646	-.0797	-.0797	-.0761	-.0809						
.050	-.0907	-.1010	-.1070	-.1095	-.0791						
.074	-.0871	-.1125	-.1198	-.1125	-.0761						
.098	-.1040	-.1222	-.1234	-.1064	-.0682						
.111	-.0894	-.1046	-.0713	-.0445	.1273	.1564	-.0453	-.1077	-.0979		
.139	-.0821	-.0900	-.0907	-.0858	.1394	.1716	.0586	-.0937	-.0888		
.168	-.0821	-.0870	-.0900	-.0919	.1418	.1728	.0574	-.0919	-.0900		
.191	-.0821	-.0828	-.0846	-.0943	.1370	.1698		-.0919			
.255	-.0712	-.0919	-.0907	.0593	.1728	.1728					
.344	-.0572	-.0554	-.0724	-.0313	.1437	.1777	-.0821				
.392			-.0402		.1771	.1771	-.0421				
.667	999.9999	-.0864	-.0938	.0708		.1789	-.0961				
.702	-.0730	-.0710	-.0717	-.0743	.1507	.1740	-.0418				
.724	-.1259	-.1241	-.0986	-.1045	-.0621	-.0051	999.9999				
.744	-.0056	-.0494	-.0749	.1655	.5244	.5742	-.0038				
.755	-.0409999.9999	-.0700	-.0463	.0398	.1844	.2080	-.0445				
.869	-.0761	-.0937	-.0542	.1200	.2205	.2205					
.902	999.9999	-.1095	-.1101	-.0487	-.0184						
.923	-.1034	-.1137	-.0518	.0969	.1528	.1528	-.0572				
.945	-.1174	-.1332	-.1149	-.0451	.0076	.0076	-.1119				
.982	.1327		.1510		.4977	.4977					

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R11021) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. YMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .416 ALPHA (1) = 169.900 O(PSF) = 3.4500 P0 = 32.050 P = 28.450 RN/L = 5.5000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L	.027	.1619	.1542	.1654	.1631	.1532
.050	.1213	.1350	.1355	.1066	.1066	.0943
.074	.0785	.0814	.0831	.0188	.0188	.0067
.098	.0515	.0413	.0842	.2174	.2174	.2249
.111	.2409	.2387	.2771	.5717	.6365	.6432
.139	.0248	.0312	.0441	.1032	.0856	.0483
.168	.0083	.0034	.0162	.0540	.0247	.0326
.191	.0012	.0026	.0065	.0487	.0301	.0516
.255	.0023	.0159	.0383	.0037	.0677	.0677
.344	.0026	.0008	.0298	.0570	.0476	.0651
.392	.0026	.0008	.0672	.0672	.0663	.0659
.667	.999.9999	.0844	.0714	.0979	.1444	.0829
.702	.1146	.1012	.0122	.0084	.0800	.1175
.724	.0788	.1267	.1856	.2373	.3245	.3305
.744	.1323	.1562	.2376	.2841	.4360	.4314
.755	.1160999.9999	.1285	.1337	.1799	.2525	.2688
.869	.1881	.2480	.1479	.0844	.1831	.1644
.902	.999.9999	.3365	.3888	.1588	.0615	.0615
.923	.3493	.4104	.4758	.4005	.3037	.3037
.945	.3712	.4163	.4844	.6236	.7026	.7026
.982	.4486	.4978	.4978	.5664	.5664	.5664

MACH (2) = .589 ALPHA (1) = 169.900 O(PSF) = 7.2800 P0 = 37.870 P = 29.940 RN/L = 8.6000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L	.027	.1060	.1108	.1168	.1250	.1094
.050	.0720	.0788	.0773	.0696	.0696	.0404
.074	.0099	.0154	.0154	.0342	.0342	.0670
.098	.1184	.1180	.1630	.3098	.3098	.3298
.111	.3255	.3313	.3377	.6611	.7473	.7403
.139	.0912	.0992	.1059	.1173	.1437	.1047
.168	.0724	.0665	.0717	.1176	.0785	.0356
.191	.0596	.0591	.0603	.1013	.0206	.0516
.255	.0613	.0487	.0487	.0471	.0048	.0048
.344	.0613	.0487	.0487	.0471	.0048	.0048
.392	.0613	.0487	.0487	.0471	.0048	.0048
.667	.999.9999	.0844	.0714	.0979	.1444	.0829
.702	.1146	.1012	.0122	.0084	.0800	.1175
.724	.0788	.1267	.1856	.2373	.3245	.3305
.744	.1323	.1562	.2376	.2841	.4360	.4314
.755	.1160999.9999	.1285	.1337	.1799	.2525	.2688
.869	.1881	.2480	.1479	.0844	.1831	.1644
.902	.999.9999	.3365	.3888	.1588	.0615	.0615
.923	.3493	.4104	.4758	.4005	.3037	.3037
.945	.3712	.4163	.4844	.6236	.7026	.7026
.982	.4486	.4978	.4978	.5664	.5664	.5664

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11021)

MACH (5) = 1.947 ALPHA (1) = 169.900

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1444	-.1614	-.0925	.0050	.0565						
.902	999.9999	-.1852	-.2075	-.2005	-.1885						
.923	-.1968	-.2063	-.1359	-.0579	-.0082						
.945	-.1994	-.2199	-.2743	-.2376	-.2149						
.982	.0753	.0047	.0047		.1436						

-1426

-2725

MACH (6) = 2.740 ALPHA (1) = 169.900 O(PSF) = 6.4000 PO = 30.160 P = 1.2200 RN/L = 5.2000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0496	-.0590	-.0760	-.0779	-.0785						
.050	-.0701	-.0711	-.0972	-.0991	-.1014						
.074	-.0719	-.0857	-.1026	-.1087	-.1129						
.098	-.0834	-.0942	-.1056	-.1171	-.1075						
.111	-.0318	-.0337	-.0331	-.0333	.0266						
.139	-.0209	-.0277	-.0229	-.0327	.0236						
.168	-.0211	-.0312	-.0253	-.0372	.0237						
.191	-.0217	-.0324	-.0294	-.0409	.0219						
.255	-.0072	-.0253	-.0591	-.0001	.0405						
.344	.0054	-.0321	-.0487	-.0331	.0252						
.392			-.0132	-.0132	.0387						
.667	999.9999	-.0398	-.0773	-.0712	.0393						
.702	-.0072	-.0411	-.0754	-.0488	.0204						
.724	-.0905	-.0899	-.0900	-.0378	-.0887						
.744	.0174	.0405	.0369	.1154	.2610						
.755	.0030999.9999		.0000	-.0079	.0699						
.869	-.0432	-.0591	-.0343	.0350	.0548						
.902	999.9999	-.0893	-.0972	-.0875	-.0665						
.923	-.0930	-.0833	-.0609	-.0072	.0183						
.945	-.1141	-.1154	-.1141	-.0893	-.0778						
.982	.1595		.1196		.2465						

-0434

-0356

-0241

-0235

-0458

-0333

-0126

-0676

-0742

999.9999

.0477

-.0059

-.0615

-.1111

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TABULATED SOURCE DATA, MSFC TWT 603 (5A28F)

WSEC TWT 603 (SA28F) S88 - CLEAN ATTACH AFT RING (R11021)

WACH	71	3 480	ALBIA / 11	159 980	100 (PSE)	5 8600	PO	59 980	P	81000	RN/L	7.1000
------	----	-------	------------	---------	-----------	--------	----	--------	---	-------	------	--------

SECTION 1158B

DEPENDENT VARIABLE CP

THETA 0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	-.0241	-.0354	-.0441	-.0463	-.0458
.050	-.0343	-.0390	-.0390	-.0497	-.0548	-.0564
.074	-.0320	-.0452	-.0452	-.0531	-.0599	-.0655
.098	-.0393	-.0503	-.0503	-.0585	-.0616	-.0610
.111	-.0139	-.0227	-.0272	-.0094	-.0046	-.0308
.139	-.0091	-.0159	-.0221	-.0139	-.0043	-.0280
.168	-.0147	-.0232	-.0176	-.0179	-.0253	-.0292
.191	-.0131	-.0123	-.0164	-.0204	-.0139	-.0295
.255	-.0069	-.0182	-.0300	-.0026	-.0060	-.0477
.314	-.0024	-.0128	-.0202	-.0176	-.0295	-.0375
.392	.999	.9999	-.0193	-.0041	-.0094	-.0359
.667	-.0035	-.0122	-.0405	-.0435	-.0307	-.0396
.702	-.0469	-.0480	-.0439	-.0570	-.0514	-.0457
.744	.0302	.0404	.0320	.0398	.0907	-.0497
.755	.0263	.9999	.0099	.0060	.0229	.2016
.869	-.0103	-.0221	-.0092	-.0052	.0471	.0648
.902	.999	.9999	-.0480	-.0475	-.0396	.0697
.923	-.0452	-.0413	-.0413	-.0204	-.0206	-.0224
.945	-.0584	-.0621	-.0621	-.0570	-.0390	-.0453
.982	.1920			.1556		-.0266
						-.2782
						-.0227
						-.0548
						-.0300
						-.0238
						-.0176
						-.0272
						-.0294
						-.0244
						-.0091
						-.0396
						-.0446
						.999
						.9999
						.0387
						.0055
						-.0227
						-.0548
						-.0266
						-.2782

MACH	(8)	=	4.450	ALPHA	(11)	=	169.900	O(PSC)	=	4.0800	PQ	=	80.010	P	=	.29000	RN/L	=	6.00000
------	-----	---	-------	-------	------	---	---------	--------	---	--------	----	---	--------	---	---	--------	------	---	---------

SECTION () SRB

DEPENDENT VARIABLE CP

0000	22	5000	45	0000	67	5000	90	0000	12	5000	35	0000	57	5000	80	0000	225	0000	270	0000	315	0000
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[illegible]

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F) (R11021)

MACH (8) = 4.450 ALPHA (1) = 169.900 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.869	.902	.923	.945	.962	.979	.999	.999	.999	.999	.999	.999
	.0174	.0022	.0022	-.0024	.0136	.0079	.0090	.0581	.0375	.0611	.0240	.0107
	.0862	.0375	.0611	.0240	.0107	.2951	.0862	.0375	.0611	.0240	.0107	.2951

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TABULATED SOURCE DATA. MSFC INT 603 (SA28F)

(R11022) (22 AUG 75) PAGE 87

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

REFERENCE DATA

SREF	=	116.2600	SQ.FT.	YMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

PN-SCH	2.000	PHI	.	.000
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MACH (1) = 1.198 ALPHA (1) = 169.900 Q(PSF) = 9.1400 P0 = 22.010 P = 9.1000 RN/L = 6.7000

SECTION 115RB

DEPENDENT VARIABLE CP

THEIA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R11023) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 50.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .393 ALPHA (1) = 174.900 Q(PSF) = 3.1100 PO = 32.020 P = 28.790 RN/L = 9.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.1710	.1775	.1789	.1834	.1845
.050	.1415	.1418	.1508	.1438	.1336
.074	.0843	.0899	.0908	.0651	.0457
.098	.0352	.0384	.0757	.1390	.1661
.111	.2303	.2428	.2881	.4376	.5293
.139	.0120	.0094	.0079	.0492	.0399
.168	.0145	.0187	.0289	.0137	.0450
.191	.0274	.0314	.0381	.0236	.0065
.255	.0307	.0426	.0338	.0388	.0155
.344	.0380	.0451	.0266	.0169	.0362
.392	.999.9999	.1216	.0949	.0536	.0531
.667	.1292	.1277	.0949	.0536	.0534
.702	.0658	.1047	.1579	.1903	.1216
.724	.1777	.1929	.2890	.3298	.0395
.753	.1399999.9999	.1801	.2083	.2296	.0718
.859	.0425	.0554	.0490	.1457	.999.9999
.902	.999.9999	.1896	.1841	.0667	.3217
.923	.2451	.2684	.3139	.2564	.1630
.945	.2952	.2839	.3649	.4859	.0191
.982	.6658	.7316	.7316	.7316	.3093
					.3565
					.7542

MACH (2) = .590 ALPHA (1) = 174.900 Q(PSF) = 7.2800 PO = 37.830 P = 29.900 RN/L = 8.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.1149	.1205	.1204	.1215	.1268
.050	.0781	.0815	.0839	.0825	.0775
.074	.0171	.0209	.0212	.0034	.0202
.098	.1248	.1298	.1649	.2389	.2653
.111	.3438	.3645	.4259	.5043	.6786
.139	.0932	.0944	.1030	.1185	.6894
.168	.0642	.0603	.0614	.0732	.1197
.191	.0529	.0465	.0459	.0576	.1293
.255	.0454	.0385	.0484	.0606	.0515
					.0743
					.0339
					.0604
					.3887
					.1032
					.0625

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STABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

(R11023)

UNSEC THE 603 (SAPBE) SBB - CLEAN ATTACH AFT RING

MACH (2) = .590 ALPHA (1) = 174.900

SECTION 115RB

DEPENDENT VARIABLE CP

0000 23 5000 45 0000 57 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

[illegible]

	ALPHA / 10	BETA	P	RN/L
687	174.000	24.100	22.010	12.970
				6.3000

SECTION 1135

DEPENDENT VARIABLE CP

0000 23 5000 45 0000 67 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

X/L	0.27	.0850	.0829	.0699	.0704	
.050	.0411	.0015	.0381	-.0177	-.0244	
.074	-.0281	-.0422	-.0422	-.1644	-.1989	
.098	-.1823	-.2436	-.2436	-.3317	-.3317	
.111	-.3435	-.3490	-.3591	-.3330	-.3240	-.3250
.139	-.1081	-.1043	-.1071	-.1068	-.0667	-.3546
.168	-.0735	-.0689	-.0704	-.0982	-.0657	-.0918
.191	-.0620	-.0564	-.0600	-.0715	-.0381	-.0605
.255	-.0704	-.0564	-.0600	-.0567	-.0318	-.0756
.344	-.1210	-.1036	-.1321	-.0683	-.0350	-.0664
.392	.999	.9999	.1071	-.1115	-.0755	-.1415
.667	.0636	.0600	.0749	-.1257	-.0746	-.1853
.702	.0376	.0277	-.0474	.0970	-.0950	-.1008
.724	-.0015	-.0274	-.0277	.0705	.0678	.0777
.744	-.0311	-.0311	.0277	.1031	-.1081	999.9999
.755	-.0318999	.9999	.0836	.1301	.1587	.0588
.869	-.3723	.999	.0240	.0677	.1045	.0052
.902	.999	.9999	.4239	-.3843	-.3358	
.923	.4338	.4085	-.4483	-.4866	-.4922	-.4673
.945	-.4061	-.5075	-.4829	-.5346	-.5445	-.4346
.982	-.4085	-.5364	-.4688	-.5515	-.5866	
			-.5364	-.5591	-.5591	

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 90

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11023)

MACH (4) = 1.201 ALPHA (1) = 174.900 Q(PSF) = 9.1600 PO = 22.020 P = 9.0600 RN/L = 6.6000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0082	-.0065	-.0254	-.0199	-.0148
.050	-.0521	-.0694	-.0811	-.0867	-.0867
.074	-.1872	-.2146	-.3137	-.4439	-.4476
.098	-.5308	-.5504	-.5427	-.5459	-.5397
.111	-.2429	-.2033	-.1859	-.1572	-.1269
.139	-.0698	-.0588	-.0513	-.0293	-.0069
.168	-.0554	-.0462	-.0470	-.0292	-.0246
.191	-.0584	-.0491	-.0584	-.0491	-.0250
.255	-.1065	-.0859	-.0782	-.0474	-.0351
.344	-.1144	-.0749	-.0888	-.0622	-.0272
.392			-.0774	-.0216	-.0216
.667	999.9999	.1043	-.0482	.0049	-.0639
.702	.0534	.0424	.0264	-.0017	-.0148
.724	-.0792	-.0854	-.1146	-.1315	-.1678
.744	-.0212	-.0216	-.2408	-.2953	-.3538
.755	-.0534	999.9999	.1389	.3036	-.4498
.869	.3493		.0576	.2091	.2761
.902	999.9999	-.3557	.1520	.2091	.3122
.923	-.3813	-.3900	-.3170	-.1421	-.0719
.945	-.3404	-.4051	-.4132	-.4050	-.3732
.982	-.2266	-.3949	-.4498	-.3954	-.2805
			-.2741	-.5842	-.7196
					-.2401

MACH (5) = 1.950 ALPHA (1) = 174.300 Q(PSF) = 11.030 PO = 30.000 P = 4.1500 RN/L = 7.5000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0004	-.0005	-.0086	-.0111	-.0069
.050	-.0672	-.0857	-.1075	-.1436	-.1693
.074	-.1655	-.1418	-.1713	-.1976	-.1972
.098	-.2023	-.1879	-.2030	-.2091	-.2080
.111	-.0233	-.0388	-.0310	-.0142	-.0051
.139	.0092	-.0051	-.0066	-.0032	-.0137
.168	.0011	-.0044	-.0132	-.0023	.0123
.191	-.0020	-.0097	-.0188	.0081	.0155
.255	-.0044		-.0132	-.0044	.0176
.344	.0379	-.0079	-.0037	-.0030	.0255
.392			-.0338	.0127	.0120
.667	999.9999		.0270	.0316	.0326
.702	.0256	-.0205	-.0423	-.0191	-.0162
.724	-.1517	-.0842	-.0538	-.0486	-.0331
.744	.0572	-.1639	-.1872	-.1769	-.0058
.755	.0095	999.9999	.2093	-.1888	-.0167
			.1220	-.1952	999.9999
				.2868	.2310
				.0912	.1196

REPRODUCIBILITY OF THE
ORIGINAL PAGE 1

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11023)

MACH (7) =	3.480	ALPHA (1) =	174.900	OIPSF) =	6.8500	P0	=	60.010	P	=	.81000	RN/L	=	7.0000
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DEPENDENT VARIABLE CP

SECTION 11 SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

WACH (8) =	4.450	ALPHA (1) =	174.900	Q(PSF) =	4.0800	PO	=	80.040	P	=	.29000	RN/L	=	6.0000
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SECTION () SRB

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	1027	1024	0091	0062	0062
.027	.1027	-.0024	-.0091	-.0062	-.0062
.050	.0950	-.0043	-.0081	-.0038	-.0119
.074	.1406	-.0081	-.0091	-.0147	-.0148
.098	.0669	-.0119	-.0119	-.0176	-.0195
.111	.0060	.0003	.1510	.0022	.0231
.139	.0008	.0079	.0184	.0140	.0287
.168	.0060	.0041	.0060	.0136	.0306
.191	.0060	.0107	.0079	.0136	.0363
.255	.0136	.0041	.0013	.0117	.0240
.344	.0088	.0126	.0079	.0951	.0449
.332			.0136		.0221
.667	.999	.0079	.0098	.0117	.0212
.702	.0117		.0013		.0202
.724	-.0100	.0913	-.0034	-.0015	.0145
.744	.0553	.0629	-.0148	-.0091	-.0138
.755	.043999	.9999	.0620	.0950	.0875
			.0401	.0420	.0543

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F) (R11023)

MACH (8) = 4.450 ALPHA (1) = 174.900 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

SECTION (1) SRB DEPENDENT VARIABLE CP THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
.869	.0212	.0155	.0250	.0477	.1652							
.902	.9999	-.0081	-.0072	-.0053	.0174							
.923	-.0091	-.0072	.0050	.0221	.0458							.0041
.945	-.0157	-.0176	-.0119	-.0043	.0050							-.0091
.982	.2012		.2126		.2420							

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SAZBF)

PAGE 94

MSFC TWT 603 (SAZBF) SRB - CLEAN ATTACH AFT RING (R11024) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 1.196 ALPHA (1) = 174.900 O(PSF) = 9.1300 PO = 22.000 P = 9.1200 RN/L = 6.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0277	.0127	-.0031	-.0111	-.0042
.050	-.0318	-.0499	-.0603	-.0691	-.0674
.074	-.1616	-.1901	-.2833	-.4236	-.4272
.098	-.5182	-.5399	-.5353	-.5349	-.5295
.111	-.2295	-.1945	-.1736	-.1381	-.1208
.139	-.0554	-.0455	-.0357	-.0286	-.0045
.168	-.0401	-.0335	-.0315	-.0233	-.0086
.191	-.0433	-.0348	-.0411	-.0307	-.0121
.255	-.0313	-.0669	-.0565	-.0411	-.0220
.344	-.0998	-.0608	-.0693	-.0390	-.0331
.392			-.0586	-.0138	-.0143
.567	.999 9999	.1211	-.0349	.0266	-.0217
.702	.0672	.0600	.0502	.0110	.0505
.724	-.0182	-.0652	-.0972	-.1534	-.1725
.744	-.0056	-.0050	-.2190	-.2586	-.3379
.755	-.0346	.999 9999	.1569	.2543	.4642
.869	-.3317		.0715	.1648	.3283
.902	.999 9999		-.2972	.2253	.0510
.923	-.3596		-.3953	-.1181	-.0510
.945	-.3153		-.4132	-.3849	-.3524
.982	-.2075		-.3755	-.3790	-.2590
				-.5580	-.6996
					-.4241
					-.2252

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TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

PAGE 95

MSCC TWT 603 (5A28F) SBR - CLEAN ATTACH AFT RING (R11025) (22 AUG 75)

REFERENCE DATA

[illegible]

PARAMETRIC DATA

MACH (1) =	392	ALPHA (1) =	179.900	O(P5F) =	3.1000	PO	=	32.000	P	=	28.780	AN/L	=	5.2000
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SECTION 115RB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.1774	.1744	.1765		.1732	.1748
.050	.1511		.1420	.1420		.1430	.1379
.074	.0920		.0879	.0833		.0724	.0724
.098	-.0566	-.0765		-.0748		-.0789	-.0770
.111	-.3259	-.3324	-.3083	-.3297	-.3533	-.3437	-.3501
.139	-.0094	-.0112	-.0183	-.0126	-.0258	-.0256	-.0248
.168	.0261	.0383	.0079	.0178	.0106	.0187	.0330
.191	.0356	.0404	.0638	.0479	.0309	.0282	.0476
.255	.0653	.0545	.0437	.0521	.0477	.0379	.0477
.344	.1098	.0845	.0324	.0324	.0407	.0461	.0106
.392			.0154	.0154		.0253	.1131
.657	.999	.9999	.1244	.1114	.0853	.0824	
.702	.0972	.1081	.1138	.0849	.0693	.0517	.0991
.724	-.1730	-.1741	-.1529	-.1707	-.1659	-.1805	.999
.744	.3270	.3183	.2938	.2940	.3055	.2797	.2926
.755	.205999	.9999	.1929	.1978	.1958	.1895	.1967
.869	.1179		.1136	.1065		.1113	
.902	.999	.9999	-.0458	-.0563	.1002	-.0615	
.923	-.2182		-.2213	-.2197	-.2192	-.2210	-.2106
.945	-.3469		-.3380	-.3402	-.3566	-.3168	-.3151
.982	-.9074		-.8517	-.8517		-.8676	

MACH (2)	ALPHA (1)	ρ (PCF)	P0	P	RN/L
500		179.900	37.990	29.830	8.6000

SECTION 11.0135 BUS (1) 598

DEPENDENT VARIABLE CP

THEFT 0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

[illegible]

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11025)

MACH (2) = .598 ALPHA (1) = 179.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.344	.0299	-.0069	-.0526	-.0518	-.0525	-.0461	-.0423	-.0550
.392			-.0768	-.0480			-.0552	-.0887
.667	999.9999	.0711		.0284			-.0221	.0456
.702	.0447	.0506	.0388	.0188	.0040	-.0094	.0120	.0281
.724	-.2115	-.2189	-.2009	-.2052	-.2035	-.2142	-.2076	999.9999
.744	.2571	.2443	.2297	.2162	.2216	.2015	.1988	.2035
.755	.1531	999.9999	.1320	.1357	.1352	.1201	.1175	.1235
.869	-.0470		-.0535	-.0546		-.0631	-.0741	
.902	999.9999	-.2457	-.2457	-.2417	-.2497	-.2584	-.2584	
.923	-.3828	-.3828	-.3828	-.3749	-.3773	-.3790	-.3790	-.3522
.945	-.4317	-.4317	-.4379	-.4272	-.4319	-.4259	-.4259	-.3951
.982	-.9327	-.9327		-.8974		-.9247		

MACH (3) = .900 ALPHA (1) = 179.900 Q(PSF) = 7.3800 PO = 22.010 P = 13.020 RW/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	.1135	.1107	.1079	.1060	.1018			
.050	.0759	.0702	.0612	.0645	.0602			
.074	-.0230	-.0422	-.0396	-.0316	-.0284			
.098	-.2761	-.2839	-.2700	-.2610	-.2460			
.111	-.3460	-.3292	-.3220	-.3278	-.3412	-.3454	-.3488	-.3459
.139	-.0813	-.0771	-.0818	-.0891	-.0912	-.0988	-.1081	-.0927
.168	-.0401	-.0327	-.0396	-.0505	-.0552	-.0591	-.0638	-.0523
.191	-.0256	-.0214	-.0276	-.0349	-.0438	-.0515	-.0518	-.0396
.255	-.0246		-.0354	-.0354	-.0480	-.0480		
.344	-.0794	-.0100	-.1114	-.1099	-.1069	-.0985	-.0884	-.1084
.392			-.1868	-.1868	-.1826	-.1826		
.667	999.9999	.1850		.1381	.1098	.0974	.1249	.1055
.702	.1732	.1692	.1416	.1272	.1132	.0952	.0928	.1055
.724	.0596	.0566	.0426	.0316	.0232	.0189	.0200	999.9999
.744	.1113	.1139	.1001	.0918	.0807	.0659	.0601	.0627
.755	.0677	999.9999	.0643	.0588	.0479	.0343	.0347	.0305
.869	-.3806		-.3772		-.3833	-.3795		
.902	999.9999	-.3916	-.3891	-.3851	-.4006	-.4006		
.923	-.4024	-.4106	-.4125	-.4116	-.4168	-.4168		-.4053
.945	-.4096	-.4071	-.4173	-.4147	-.4136	-.4136		-.4011
.982	-.6794		-.6893		-.6826			

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11025)

MACH (5) = 1.952 ALPHA (1) = 179.920

SECTION (1) SRB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L
.869 -.0443
.902 999.9999
.923 -.1574
.945 -.2786
.982 .0562-.0527
-.1997
-.1528
-.2764
.0717-.0488
-.1980
-.1608
-.2816
-.0717-.0538
-.2055
-.1609
-.2817
.0592-.0616
-.1987
-.1652
-.2810
.0592

MACH (6) = 2.740 ALPHA (1) = 179.900 QIPSF = 6.3800 PO = 30.060 P = 1.2100 RN/L = 5.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L
.027 -.0260
.050 -.0647
.074 -.0767
.098 -.0852
.111 -.0120
.139 -.0047
.168 -.0089
.191 .0071
.255 .0117
.344 .0184
.382 999.9999
.667 999.9999
.702 -.0190
.724 -.0943
.744 .1734
.755 .0593 999.9999
.869 .0003
.902 999.9999
.923 -.0736
.945 -.1234
.982 .1561-.0223
-.0667
-.0837
-.0933
-.0014
-.0131
-.0101
-.0017
.0192
-.0369
-.0087
-.0194
-.0877
.1327
.0593 999.9999
-.0040
-.0961
-.0736
-.1210-.0179
-.0610
-.0816
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-.0102
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-.0186
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-.0942
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.0766
-.0081
-.0938
-.0789
-.1200

(R11023)

MSFC THY 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (8) = 4.450 ALPHA (1) = 179.920

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 43.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.869	.0373	.0335	.0344	.0534	.0534
.902	.999	-.0005	.0013	.0003	.0269
.923	.0098	.0136	.0259	.0155	.0231
.945	-.0034	.0013	.0051	.0050	.0088
.982	.2117		.2231		.2241

.0164
.0088

1026) (22 AUG 75)

MSFC TWT 803 (5A28F) SRB - CLEAN ATTACH AFT-RING

REFERENCE DATA

PARAMETRIC DATA

PN-SCH	2.000	PHI	-	.000
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SREF	=	116.2600	SO.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

SCALE = 17000' 5000'

00000' 5.8000

00000' 9.0800

00000' 12.1600

00000' 15.2400

00000' 18.3200

00000' 21.4000

00000' 24.4800

00000' 27.5600

00000' 30.6400

00000' 33.7200

00000' 36.8000

00000' 39.8800

00000' 42.9600

00000' 46.0400

00000' 49.1200

00000' 52.2000

00000' 55.2800

00000' 58.3600

00000' 61.4400

00000' 64.5200

00000' 67.6000

00000' 70.6800

00000' 73.7600

00000' 76.8400

00000' 79.9200

00000' 83.0000

00000' 86.0800

00000' 89.1600

00000' 92.2400

00000' 95.3200

00000' 98.4000

00000' 101.4800

00000' 104.5600

00000' 107.6400

00000' 110.7200

00000' 113.8000

00000' 116.8800

00000' 120.0000

00000' 123.0800

00000' 126.1600

00000' 129.2400

00000' 132.3200

00000' 135.4000

00000' 138.4800

00000' 141.5600

00000' 144.6400

00000' 147.7200

00000' 150.8000

00000' 153.8800

00000' 156.9600

00000' 160.0400

00000' 163.1200

00000' 166.2000

00000' 169.2800

00000' 172.3600

00000' 175.4400

00000' 178.5200

00000' 181.6000

00000' 184.6800

00000' 187.7600

00000' 190.8400

00000' 193.9200

00000' 197.0000

00000' 200.0800

00000' 203.1600

00000' 206.2400

00000' 209.3200

00000' 212.4000

00000' 215.4800

00000' 218.5600

00000' 221.6400

00000' 224.7200

00000' 227.8000

00000' 230.8800

00000' 233.9600

00000' 237.0400

00000' 240.1200

00000' 243.2000

00000' 246.2800

00000' 249.3600

00000' 252.4400

00000' 255.5200

00000' 258.6000

00000' 261.6800

00000' 264.7600

00000' 267.8400

00000' 270.9200

00000' 274.0000

00000' 277.0800

00000' 280.1600

00000' 283.2400

00000' 286.3200

00000' 289.4000

00000' 292.4800

00000' 295.5600

00000' 298.6400

00000' 301.7200

00000' 304.8000

00000' 307.8800

00000' 310.9600

00000' 314.0400

00000' 317.1200

00000' 320.2000

00000' 323.2800

00000' 326.3600

00000' 329.4400

00000' 332.5200

00000' 335.6000

00000' 338.6800

00000' 341.7600

00000' 344.8400

00000' 347.9200

00000' 351.0000

00000' 354.0800

00000' 357.1600

00000' 360.2400

00000' 363.3200

00000' 366.4000

00000' 369.4800

00000' 372.5600

00000' 375.6400

00000' 378.7200

00000' 381.8000

00000' 384.8800

00000' 387.9600

00000' 391.0400

00000' 394.1200

00000' 397.2000

00000' 400.2800

00000' 403.3600

00000' 406.4400

00000' 409.5200

00000' 412.6000

00000' 415.6800

00000' 418.7600

00000' 421.8400

00000' 424.9200

00000' 428.0000

00000' 431.0800

00000' 434.1600

00000' 437.2400

00000' 440.3200

00000' 443.4000

00000' 446.4800

00000' 449.5600

00000' 452.6400

00000' 455.7200

00000' 458.8000

00000' 461.8800

00000' 464.9600

00000' 468.0400

00000' 471.1200

00000' 474.2000

00000' 477.2800

00000' 480.3600

00000' 483.4400

00000' 486.5200

00000' 489.6000

00000' 492.6800

00000' 495.7600

00000' 498.8400

00000' 501.9200

00000' 505.0000

00000' 508.0800

00000' 511.1600

00000' 514.2400

00000' 517.3200

00000' 520.4000

00000' 523.4800

00000' 526.5600

00000' 529.6400

00000' 532.7200

00000' 535.8000

00000' 538.8800

00000' 541.9600

00000' 545.0400

00000' 548.1200

00000' 551.2000

00000' 554.2800

00000' 557.3600

00000' 560.4400

00000' 563.5200

00000' 566.6000

00000' 569.6800

00000' 572.7600

00000' 575.8400

00000' 578.9200

00000' 582.0000

00000' 585.0800

00000' 588.1600

00000' 591.2400

00000' 594.3200

00000' 597.4000

00000' 600.4800

00000' 603.5600

00000' 606.6400

00000' 609.7200

00000' 612.8000

00000' 615.8800

00000' 618.9600

00000' 622.0400

00000' 625.1200

00000' 628.2000

00000' 631.2800

00000' 634.3600

00000' 6

SECTION : 1)SRB

DEPENDENT VARIABLE CP

SECTION 101.0000

7/1X

027	-0009	-0110	-0157	-0058	0036	-1721
050	-0681	-0742	-0783	-0698	-0580	-0307
074	-2839	-2173	-2064	-1970	-1912	-0121
098	-5208	-5208	-5412	-5371	-5426	
111	-1292	-1296	-1413	-1555	-2151	-2091
139	-0184	-0231	-0271	-0354	-0597	-0573
168	-0023	-0086	-0242	-0356	-0529	-0405
191	-0020	-0149	-0354	-0550	-0619	-0176
255	-0824	-0900	-0680	-0649	-0687	-0288
344	-0173	-0304	-1157	-0730	-0419	-1245
392			-0501		-0173	-0719
667	999 9999	1732	1332	1033	0824	1316
702	-0487	-0135	-0586	-0485	-0799	-0247
724	-2626	-2739	-2646	-2666	-2581	999 9999
744	3638	3123	3607	3213	3385	2997
753	2481999 9999	2379	2490	2392	2338	2080
869	-1406	-1509	-1528	-1516	-1621	
902	902 999 9999	-4139	-4091	-4034	-3959	
923	-4363	-4352	-4445	-4423	-4333	-4598
945	-7318	-7366	-7325	-7304	-7363	-6637
982	-2460		-2352		-2365	

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 102

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R11027) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .398 ALPHA (1) = 184.780 Q(PSF) = 3.1800 PO = 32.010 P = 28.700 RN/L = 5.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	.1790	.1810	.1775	.1754	.1677
.050	.1207	.1382	.1498	.1405	.1357
.074	.0603	.0703	.0934	.0825	.0749
.098	.1498	.1387	.0831	.0571	.0593
.111	.4604	.4935	.4950	.3135	.2847
.139	.0334	.0279	.0264	.0476	.2882
.168	.0235	.0274	.0275	.0273	.0216
.191	.0464	.0546	.0298	.0167	.0314
.255	.0775	.0963	.0668	.0454	.0103
.344	.1373	.0963	.0578	.0275	.0032
.392	.1373	.0963	.0578	.0275	.0432
.667	.999.9999	.1217	.0859	.0636	.0150
.702	.1117	.1188	.0669	.0401	.0919
.724	.2675	.2677	.2178	.1816	.0816
.744	.4009	.3945	.3463	.3013	.0393
.755	.2487999.9999	.2024	.2017	.1834	.999.9999
.869	.1813	.1379	.0448	.0853	.3410
.902	.999.9999	.0440	.2077	.2128	.2022
.923	.1794	.2503	.3335	.2792	.0519
.945	.5328	.5104	.3866	.2989	.1628
.982	.8050	.7535	.7535	.2769	.3253
				.6855	.3818

MACH (2) = .597 ALPHA (1) = 184.780 Q(PSF) = 7.4600 PO = 38.000 P = 29.860 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	.1199	.1220	.1201	.1148	.1116
.050	.0725	.0831	.0857	.0811	.0716
.074	.0084	.0026	.0244	.0178	.0103
.098	.2325	.2343	.1732	.1308	.1436
.111	.5955	.6131	.5927	.4388	.3912
.139	.1006	.0952	.1062	.1196	.1087
.168	.3395	.0360	.0510	.0657	.1044
.191	.0137	.0147	.0313	.0474	.0665
.255	.0170	.0023	.0322	.0618	.0730
				.0483	.0553
				.0465	.0438

DATE 07 MAR 77
 TABULATED SOURCE DATA, MSFC THT 603 (SA28F)
 MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11027)

MACH (2) = .597	ALPHA (1) = 184.780	DEPENDENT VARIABLE CP																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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SECTION (1)SRB	DEPENDENT VARIABLE CP											
THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	247.5000
X/L	.027	.1077	.1047	.1177	.1177	.1123	.1133					
.050	.0503	.0448	.0459	.0628	.0628	.0628	.0682					
.074	-.0783		-.1168	-.1146	-.0427	-.0427	-.0217					
.098	-.3706		.3741	-.3356	-.2752	-.2752	-.2517					
.111	-.3844	-.3452	-.3151	-.2996	-.3486	-.3687	-.3678		-.3683	-.3463	-.3414	
.139	-.0894	-.0690	-.0537	-.0601	-.0920	-.1051	-.1053		-.0925	-.0820	-.0627	
.168	-.0527	-.0275	-.0137	-.0227	-.0426	-.0553	-.0621		-.0595	-.0421	-.0211	
.191	-.0338	-.0142		-.0065	-.0238	-.0401	-.0526		-.0494	-.0264		
.255	-.0140		.0256		-.0170	-.0431	-.0432		-.0825	-.0878		
.344	-.1662	-.1091		-.0842	-.0806	-.0877	-.0864		-.1221	-.1620		
.392					-.1521				.0505	.0684		
.667	999.9999		.1807	.0796	.0398				.0345	.0534		
.702	.1914	.1879		.0643	.0378		.0296		.0263	.0345		
.724	-.1099	-.1116		-.0946	-.0806		-.0263		.0040	.0534		
.744	.2065	.2748		.1874	.1165	.0445	-.0186		-.0070	.0996		
.755	.2118	999.9999		.1112	.0460	-.0132	-.0443		-.0321	.0231		
.869	-.3005		-.3657	.4271	-.4022				-.3707			
.902	999.9999		-.5000	-.4634	-.3878				-.3543			
.923	-.5660		-.5530	-.4795	-.4543				-.4492			
.945	-.6231		-.5750	-.4861	-.4146				-.4210			
.982	-.5638			-.5448	-.5192							

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11027)

MACH (4) = 1.201 ALPHA (1) = 183.900 Q(PSF) = 9.1500 PO = 22.020 P = 9.0700 RN/L = 6.5000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	-.0395	-.0703	-.0812	-.0769	-.0448
.050	-.1053	-.1568	-.1556	-.1483	-.1091
.074	-.3076	-.2234	-.2003	-.2008	-.2118
.098	-.5367	-.5445	-.5095	-.4958	-.5578
.111	-.1387	-.1314	-.1533	-.2198	-.1851
.139	-.0449	-.0626	-.0594	-.0715	-.0845
.168	-.0423	-.0351	-.0621	-.0724	-.0859
.191	-.0466	-.0500	-.0732	-.0812	-.0969
.255	-.1019	-.1091	-.1010	-.1015	-.0954
.344	-.0838	-.0834	-.2076	-.1161	-.0770
.392			-.1171	-.1171	-.0411
.667	999.9999	-.1579	-.1047	.0920	-.0802
.702	-.1348	-.1300	-.0910	-.0643	-.0299
.724	-.3462	-.3216	-.3055	-.2628	-.1295
.744	-.4349	-.4077	-.3013	-.2838	-.0140
.755	-.3013	999.9999	.2057	.1559	-.0588
.869	-.0864	-.1383	-.3125	-.3631	-.3515
.902	999.9999	-.4202	-.4277	-.4036	-.3432
.923	-.3028	-.3753	-.4529	-.4219	-.3925
.945	-.7223	-.6553	-.4693	-.4574	-.4335
.982	-.2665		-.2705	-.4156	-.4559
				-.2350	

MACH (5) = 1.958 ALPHA (1) = 184.800 Q(PSF) = 10.980 PO = 30.010 P = 4.0900 RN/L = 7.5000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	-.0138	-.0236	-.0268	-.0207	-.0176
.050	-.1581	-.1646	-.1166	-.0927	-.0920
.074	-.1775	-.2002	-.1890	-.1553	-.1602
.098	-.1954	-.2118	-.2164	-.1864	-.1980
.111	-.0074	-.0021	-.0278	-.0443	-.0250
.139	.0263	.0154	-.0007	-.0053	-.0013
.168	.0189	.0150	.0000	-.0021	.0027
.191	.0175	.0150	-.0031	-.0098	.0038
.255	.0126	-.0064	-.0021	.0045	.0012
.344	.0119	-.0007	-.0747	-.0511	.0038
.392			-.0363	-.0190	.0274
.667	999.9999	-.0247	-.0469	-.0243	.0274
.702	-.0063	-.0116	-.0616	-.0795	-.0483
.724	-.2152	-.1980	-.2019	-.1789	-.0451
.744	.2697	.2735	.2050	.2050	-.0641
.755	.0859	999.9999	.0939	.1055	999.9999
					-.1707
					.1147
					.0584
					.0461
					.0087
					.0086

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 03-01-2010 BY 60320
ORIGINAL PAGE IS P. 104

TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11027)

MACH (5) = 1.958 ALPHA (1) = 184.800

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 57.5000 67.5000 79.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	.902	.923	.945	.982
CP	-.0011	-.0005	-.0064	-.1065	-.2557
CP	-.0659	-.1945	-.1459	-.2765	.0538
CP	-.1251	-.1806	-.1854	-.2304	
CP	-.1388	-.1704	-.1870	-.2037	
CP			-.2801	.0717	

RM/L = 5.3000

PO = 30.020 P = 1.2100

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 57.5000 67.5000 79.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.567	.702	.724	.744	.755	.869	.902	.923	.945	.982
CP	-.0252	-.0809	-.0531	-.0967	-.0015	.0064	.0125	.0119	.0064	.0111	-.0129	-.0093	.0069	-.0907	.1964	.1965	.0556	.0356	.0933	.0263	-.1070
CP	-.0564	-.0852	-.0973	-.1131	-.0081	-.0151	-.0087	-.0105	-.0190	-.0325	-.0293	-.0232	-.0226	-.0677	.1431	.0429	.0184	-.0973	-.0396	-.1140	
CP	-.0481	-.0692	-.0846	-.0955	-.0219	-.0153	-.0068	-.0050	-.0038	-.0081	-.0052	-.0238	-.0330	-.0864	.1382	.0403	-.0184	-.0852	-.0741	-.1253	
CP	-.0487	-.0709	-.0870	-.1010	-.0132	-.0196	-.0028	-.0016	-.0014	-.0046	-.0082	-.0119	-.0088	-.0751	.0514	.0398	-.0179	-.0821	-.0798	-.1283	
CP					-.0257	-.0238	-.0053	-.0041	-.0056	-.0141				999.9999	.1376	.0392			-.0739	-.1247	

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11027)

MACH (7) = 3.480 ALPHA (1) = 184.800 Q(PSF) = 6.8600 PO = 60.010 P = .81000 RN/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0133	-.0362	-.0418	-.0395	-.0418						
.050	-.0441	-.0497	-.0525	-.0469	-.0480						
.074	.0139	-.0576	-.0604	-.0525	-.0554						
.098	-.0508	-.0660	-.0677	-.0576	-.0632						
.111	-.0018	-.0012	-.0415	-.0170	-.0091	-.0181	-.0193				
.139	.0094	.0111	-.0108	-.0046	-.0029	-.0040	-.0007	-.0074	-.0074		
.168	.0089	.0094	-.0068	-.0069	-.0051	-.0035	-.0001	-.0074	-.0035	-.0120	-.0018
.191	.0072	.0032	-.0035	-.0001	-.0029	-.0035	-.0010	-.0074	-.0097	-.0007	
.255	.0150	.0240	-.0108	-.0114	-.0001	-.0035	-.0015	-.0108	-.0108		
.344	-.0012	-.0125	-.0131	-.0170	.0280	.0065	.0037	-.0198	-.0198		
.392				-.0193			.0065	-.0204	-.0204		
.667	.999.9999	-.0007	-.0114	-.0086	-.0012	-.0012	-.0012	-.0108	-.0108		
.702	.0077	.0297	-.0024	-.0182	.0325	.0077	.0077	-.0159	-.0159		
.724	-.0570	-.0475	.0082	-.0469	-.0497	-.0446	-.0446	.999.9999	.999.9999		
.744	.1492	.1458	.1131	.1075	.1081	.0646	.0584	.1041	.1041		
.755	.052999.9999	.0347	.0359	.0308	.0308	.0438	.0466	.0364	.0364		
.869	.0488	.0297	.0054	-.0086	-.0086	-.0424	-.0392				
.902	.999.9999	-.0480	-.0492	-.0458	-.0458	-.0424	-.0424	-.0328	-.0328		
.923	.0077	-.0051	-.0322	-.0373	-.0373	-.0362	-.0362	-.0621	-.0621		
.945	-.0508	-.0565	-.0649	-.0655	-.0655	-.0649	-.0649				
.982	.2089	.1876	.1876				.2044				

MACH (8) = 4.450 ALPHA (1) = 183.400 Q(PSF) = 4.0800 PO = 80.030 P = .29000 RN/L = 6.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0970	.0003	-.0062	-.0033	-.0062						
.050	.0041	-.0053	-.0072	-.0081	-.0081						
.074	.1302	-.0072	-.0091	-.0109	-.0109						
.098	.0060	-.0138	-.0128	-.0110	-.0110						
.111	.0089	.0098	.1396	.0032	.0003	.0013	.0050	.0003	.0022	.0060	
.139	.0136	.0145	.0117	.0231	-.0261	.0098	.0098	.0098	.0117	.0117	
.168	.0136	.0164	.0136	.0117	.0079	.0098	.0098	.0098	.0117	.0174	
.191	.0136	.0202	.0136	.0098	.0193	.0155	.0098	.0098	.0108	.0108	
.255	.0136	.0098	.0059	.0070	.0070	.0269	.0117	.0022	.0022		
.344	.0060	.0146	.0127	.0051	.0894	.0269	.0117	.0051	.0051		
.392				.0060			.0117	.0051	.0051		
.667	.999.9999	.0079	.0060	.0098			.0079	.0060	.0060		
.702	.0089	.0885	.0041	.0032	.0098	-.1302	.0117	.0041	.0041		
.724	-.0147	-.0091	.1216	-.0072	-.0081	-.0072	-.0119	.999.9999	.999.9999		
.744	.0885	.0951	.0894	.0763	.0781	.0742	.0638	.0761	.0761		
.755	.0563999.9999	.0477	.0477	.0411	.0411	.0468	.0505	.0534	.0534		

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R11028) (22 AUG 75)

REFERENCE DATA

SREF • 116.2600 SO.FT. XMRP • 1044.0000 IN.
 LREF • 146.0000 IN. YMRP • .0000 IN.
 DREF • 146.0000 IN. ZMRP • .0000 IN.
 SCALE • .0055

RN-SCH = 2.000 PHI = .000

PARAMETRIC DATA

MACH (1) = 1.198 ALPHA (1) = 193.900 Q(PSF) = 9.1400 PO = 22.000 P = 9.0900 RN/L = 6.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0195	-.0581	-.0475	-.0543	-.0231						
.050	-.0960	-.1417	-.1420	-.1304	-.0887						
.074	-.2697	-.1994	-.1851	-.1861	-.1979						
.098	-.5201	-.5267	-.4815	-.4742	-.5418						
.111	-.1254	-.1124	-.1123	-.1731	-.1905	-.1927	-.1738	-.1314			
.139	-.0263	-.0335	-.0558	-.0493	-.0664	-.0611	-.0513	-.0554	-.0397		
.168	-.0220	-.0220	-.0439	-.0674	-.0717	-.0608	-.0512	-.0379	-.0291		
.191	-.0274	-.0379	-.0515	-.0709	-.0816	-.0658		-.0466			
.255	-.0693	-.0903	-.0757	-.0833	-.0778						
.344	-.0693	-.0714	-.1458	-.0973	-.0621	-.0521	-.1463				
.392			-.0900			-.0269	-.1253				
.667	999.9999	.1838	.1264	.1141		.1005	.1321				
.702	-.1107	-.1104	-.0681	-.0420	.0318	.0469	-.0718				
.724	-.3201	-.2955	-.2855	-.1963	-.1006	-.0461	999.9999				
.744	.4570	.4302	.3171	.1886	.0045	-.0069	.2627				
.755	.3220 999.9999		.2201	.0912	-.0368	-.0343	.1545				
.869	-.0439	-.1265	-.3047	-.3384		-.3386					
.902	999.9999	-.4056	-.4069	-.3811		-.3195					
.923	-.2807	-.3573	-.4137	-.3971		-.3722		-.4165			
.945	-.7003	-.6210	-.4461	-.3909		-.3347		-.4355			
.982	-.2437		-.2496			-.2121					

(R11029) (22 AUG 75)

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)
MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000
RN/L = 3.5000

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

MACH (1) = 3.760 ALPHA (1) = 60.120 QIPSF = 3.0700 PO = 34.000 P = .31000 RN/L = 3.5000

SECTION (1) SRB

DEPENDENT VARIABLE, CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.55	3.44	3.92	6.67	7.02	7.24	7.44	7.55	8.69	9.02	9.23	9.45	9.82
1.0791	1.0753	1.0463	1.0782	1.0697	1.0576	1.0437	1.0283	1.0113	0.9928	0.9728	0.9513	0.9283	0.9037	0.8775	0.8497	0.8203	0.7893	0.7566	0.7223	0.6865	0.6492
1.8142	1.8167	1.7978	1.7284	1.6586	1.5874	1.5148	1.4407	1.3651	1.2880	1.2094	1.1293	1.0477	0.9645	0.8797	0.7942	0.7080	0.6211	0.5335	0.4452	0.3562	0.2666
0.6592	0.6587	0.6537	0.6437	0.6287	0.6087	0.5837	0.5537	0.5187	0.4787	0.4337	0.3837	0.3287	0.2687	0.2037	0.1337	0.0587	0.0000	0.0000	0.0000	0.0000	0.0000
0.0414	0.0439	0.0376	0.0327	0.0283	0.0243	0.0207	0.0175	0.0147	0.0123	0.0103	0.0087	0.0073	0.0061	0.0051	0.0043	0.0037	0.0031	0.0026	0.0021	0.0017	0.0014

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SR8 - CLEAN ATTACH RING

(R11030) (22 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BRP = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

RM-SCH = 2.000 PH = .000

MACH () = 3.760 ALPHA () = 60.120 O(PSF) = 7.1200 PO = 78.970 P = .72000 RM/L = 8.1000

SECTION () SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 360.0000

X/L

.027	-.0003	-.0173	.1239	1.0578	1.7900							
.050	-.0119	-.0195	.1335	1.0455	1.7841							
.074	-.0014	-.0317	.1252	1.0117	1.7678							
.098	-.0097	-.0239	.1063	.9471	1.6978							
.111	-.0152	-.0233	.0366	.6510	1.2753							
.139	-.0163	-.0206	.0424	.7338	1.4111							
.168	-.0195	-.0157	.0331	.7272	1.4178							
.191	-.0212	-.0114	.0309	.7255	1.4134							
.255	-.0217	-.0321	.0364	.7264	1.3933							
.344	-.0244	-.0113	.0401	.7175	1.3820							
.392			.0439		1.3694							
.667	.999.9999	-.0456	.0406		1.3374							
.702	-.0413	-.0216	.0758		1.4096							
.724	-.0424	-.0467	.1638		2.2698							
.744	-.0473	-.0484	.0660		1.4415							
.755	-.0489999.9999	-.0538	.0077		1.1588							
.869	-.0418	-.0467	.0341		1.3878							
.902	.999.9999	-.0478	.1025		1.8430							
.923	-.0413	-.0266	.2302		1.9245							
.945	-.0435	-.0413	.1666		1.6430							
.982	-.0419		-.0549		.0150							

.6452
 .7397
 .7329
 .0249
 .0432
 .0341
 .0266
 .0261
 .0261

.0400
 .0417
 .0573
 .0856
 999.9999
 .0044
 .0042

.2012
 .1665

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)
MSFC TWT 603 (SA28F) SPR - CLEAN ATTACH RING
(R11031) (22 AUG 75)
PAGE 111

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

REFERENCE DATA

SREF	=	116.2600	SO.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
EREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

RN-SCH -	1.000	PHI	-	.000
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MACH	ALPHA	11	75 000	01P51	3.0700	PO	P	RN/L	3.5000
3.750	11								

SECTION 115RB

DEPENDENT VARIABLE CP

THETA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

[illegible]

MSFC THT 603 (5A28F) SRB - CLEAN ATTACH RING

(R11032) (22 AUG 75)

REFERENCE DATA

SREF	=	116.2600	SO.FT.	XMRP	=	104.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

BN-SCH	-	2.000	PHI	-	.000
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PARAMETRIC DATA

MACH () = 3.760 ALPHA () = 75.000 Q(PSF) = 7.1300 PO = 79.020 P = .72000 RN/L = 8.0000

DEPENDENT VARIABLE CP

INITIAL	0.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	247.5000	270.0000	292.5000	315.0000
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X/L

0.27	-0.172	-0.0446	0.0894	.9972	1.7521
0.50	-0.397	-0.0435	0.0943	.9927	1.7814
0.74	-0.421	-0.0435	0.0867	.9755	1.7971
0.98	-0.337	-0.0429	0.0812	.9734	1.8095
1.11	-0.402	-0.0446	-0.0467	.9625	1.7841
1.39	-0.429	-0.0419	-0.0489	.9115	1.7491
1.60	-0.397	-0.0408	-0.0478	.9017	1.7222
1.91	-0.402	-0.0397	-0.0457	.94716	1.7135
2.55	-0.375	-0.0381	0.0541	.9091	1.7005
3.44	-0.380	-0.0370	0.0611	.9672	1.7038
3.92	999.9999	-0.0435	0.0617	.9099	1.6945
6.67	-0.429	0.0020	0.0725	.9459	1.6918
7.02	-0.424	-0.0419	0.0353	1.4659	1.7124
7.24	-0.462	-0.0440	0.0486	1.6674	1.8959
7.44	-0.451999.9999	-0.0435	0.0549	1.5312	1.7472
7.55	-0.413	-0.0435	0.0585	1.4938	1.7450
8.69	999.9999	-0.0435	0.0785	.9419	1.7276
9.02	-0.424	-0.0435	0.0905	.9137	1.7732
9.23	-0.435	-0.0424	1.357	.9820	1.8139
9.45	-0.185	-0.0424	0.981	.9440	1.7694
9.82	-0.185	-0.0424	-0.0288		1.1752

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TABULATED SOURCE DATA, NSFC TWT 603 (5A28F)

(R11033) (22 AUG 75)

MSFC 1W1 603 (SA28F) SRB - CLEAN ATTACH RING

REFERENCE DATA

SREF	=	116.2600	SO. FT.	XMPF	=	1044.0000	IN.
LRBF	=	146.0000	IN.	YMPF	=	.0000	IN.
BREF	=	146.0000	IN.	ZMPF	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

PM-SCH -	1.000	PMI	•	.000

	WAGE	ALBUA	P0	P	RN/L
	7.750	90.000	3.0700	.31000	3.5000

DEPENDENT VARIABLE CP

SECTION 11.035

1411A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.25.0000 270.0000 315.0000

X/L	0.027	.0928	.0669	.0651	.8054	1.5343	
	.050	.0763	.0617	.0855	.8287	1.5860	
	.074	.0852	.0565	.0816	.8313	1.6250	
	.098	.0750	.0473	.0915	.8797	1.6679	
	.111	.0631	.0461	.1476	.9220	1.7219	
	.139	.0617	.0524	.1115	.9741	1.8280	.9079
	.168	.0527	.0515	.1070	.9880	1.8771	.9717
	.191	.0485	.0554	.1084	.4172	1.5761	.0940
	.255	.0448	.0236	.1120	1.0039	1.8252	.0966
	.314	.0376	.0650	.1115	.4277	1.8367	.0902
	.332	.999	.0066	.1115	.9900	1.8117	.1055
	.667	.0047	.0348	.0356	.4104	1.8291	.1079
	.702	.0047	.0475	.0865	.3915	1.8254	.1030
	.724	.0009	.0015	.0802	.3978	1.5595	.999
	.755	.0015999	.00128	.0841	.3928	1.8191	.1030
	.869	.0021	.0027	.0866	.9691	1.8227	.1043
	.902	.999	.0027	.0701	.9056	1.8250	.0917
	.923	.0110	.0185	.1442	.9479	1.8042	.1029
	.945	.0097	.0110	.0931	.9280	1.8295	
	.982	.0576		.0513		1.6921	

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TABULATED SOURCE DATA, MSFC TWT 603 (5A28F)

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MSFC INT 603 (SA28F) SRB - CLEAN ATTACH RING

(R11035) (22 AUG 75)

REFERENCE DATA

SRET	=	116.2600	\$0. FT.	XMRP	=	104.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

PN-SCH	1.000	PHI	-	.000
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MACH () =	3.760	ALPHA () =	105.000	Q(PSF) =	3.0700	P0 =	34.030	P =	.31000	RN/L =	3.5000
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SECTION 115RB

THETA
 .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7.1x

027	.0855	.0627	.0578	.5508	1.1223	
050	.0690		.5717	.5717	1.1522	
074	.0817	.0551	.5868	.5868	1.1664	
098	.0715	.0449	.6309	.6309	1.2205	
111	.0627	.0475	.6624	.2592	1.1390	.6455
139	.0590	.0501	.1106	.3955	1.4373	.0434
168	.0526	.0336	.1093	.9303	1.4725	.0967
191	.0462	.0236	.1057	.3991	1.4713	.0981
255	.0452	.0249	.1043	.9371	1.7057	
344	.0363	.0614	.1041	.4007	1.4814	.0929
392			.1044		1.7019	.1005
667	.999	-.0040	.0792	.9162	1.7094	.0917
702	.0047	.0363	.0778	.3815	1.5002	.0917
724	.0073	-.0053	.0655	.3336	1.0681	.999
744	.0022	-.0002	.1019	.4449	1.2152	.9999
755	-.0015	.9999	.0917	.3865	1.5696	.1232
869	.0035	-.0053	.0532	.8842	1.7435	.1080
902	.999	-.0052	.0438	.8590	1.7158	
923	.0072	.0162	.1284	.8451	1.8077	.0803
945	.0047	.0047	.0880	.7815	1.6338	.0980
992	.1887		.0931		1.5595	
					1.7775	

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING (R11038) (22 AUG 75)

REFERENCE DATA

SREF	=	116.2600	SO. FT.	XMRP	=	1044.0000	IN.
LREF	=	145.0000	IN.	YMRP	=	.0000	IN.
BREF	=	145.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

AN-SCH -	2.000	PMI -	.000
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PARAMETRIC DATA

MACH (1)	ALPHA (1)	PO	P	RM/L
3.760	105.000	7.1300	78.990	8.1000

SECTION 115A8

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

x/L	0.27	0.045	-0.098	0.014	0.011	1.192	0.027
0.50	-0.048	-0.130	-0.098	0.069	0.014	1.1398	-0.027
0.74	0.018	-0.142	-0.098	0.0134	0.014	1.1531	-0.027
0.98	-0.048	-0.156	-0.098	0.0270	0.014	1.1958	-0.027
1.11	-0.098	-0.190	-0.098	0.0205	0.014	1.3175	-0.027
1.39	-0.125	-0.169	-0.250	0.0565	0.014	1.6130	-0.027
1.68	-0.169	-0.152	-0.277	0.0629	0.014	1.6885	-0.027
1.91	-0.196	-0.114	-0.277	0.0651	0.014	1.6728	-0.027
2.55	-0.213	-0.114	-0.283	0.0699	0.014	1.6831	-0.027
3.44	-0.239	-0.114	-0.283	0.0705	0.014	1.6880	-0.027
3.92	999.9999	-0.402	-0.402	0.0730	0.014	1.6842	-0.027
7.02	-0.364	-0.182	-0.260	0.0617	0.014	1.6956	-0.027
7.24	-0.359	-0.402	-0.161	0.0449	0.014	1.7402	-0.027
7.44	-0.370	-0.381	-0.402	0.0915	0.014	1.5666	-0.027
7.55	-0.397999	999.9999	-0.419	0.0753	0.014	1.7857	-0.027
8.69	-0.413	-0.424	-0.419	0.0437	0.014	1.7244	-0.027
9.02	999.9999	-0.440	-0.440	0.0211	0.014	1.6839	-0.027
9.23	-0.402	-0.305	-0.305	0.0763	0.014	1.7783	-0.027
9.45	-0.391	-0.391	-0.391	0.0617	0.014	1.6050	-0.027
9.82	-1.980	-0.391	-0.391	0.0672	0.014	1.5338	-0.027

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING (R11037) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 119.900 Q(PSF) = 3.0700 PO = 34.030 P = .31000 RN/L = 3.5000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.1232	.0022	.0072	.2582	.5541
.050	.0110	.0022	.0123	.2945	.6095
.074	.1597	.0022	.0110	.3122	.6378
.098	.0224	.0027	.0110	.2682	.5891
.111	.0060	.0053	.1799	.6712	1.2596
.139	.0035	.0027	.0077	.3323	1.1765
.168	.0002	.0027	.0027	.3248	1.1853
.191	.0001	.0015	.0090	.3399	1.1752
.235	.0002	.0065	.0728	.7468	1.3640
.344	.0015	.0022	.0716	.3739	1.1891
.392	.999.9999	.0229	.0639	.7405	1.3730
.702	.0179	.0803	.0362	.2933	1.4109
.724	.0165	.0204	.1134	.1264	1.4234
.744	.0191	.0165	.0173	.5893	1.4445
.755	.0204	.999.9999	.1599	.4243	2.0588
.859	.0216	.0234	.1118	.4243	1.7157
.902	.999.9999	.0267	.0387	.7267	1.4146
.923	.0179	.0115	.0211	.6817	1.9501
.945	.0204	.0229	.0753	.5654	1.0681
.982	.2618		.0299	.5003	1.0454
			.1408		1.7070

.6579 .0350 -.0027
 .7481 .0677 -.0002
 .7418 .0702 -.0053
 .0691
 .0690
 .0702
 .0716
 .0476
 999.9999
 .1876
 .1307

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 118

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

(R11038) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCM = 2.000 PMI = .000

MACH (1) = 3.760 ALPHA (1) = 119.900 OIPSF = 7.1300 PO = 79.010 P = .72000 RN/L = 9.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	.0091	-.0321	.0226	-.0305	-.0348	-.0370	-.0381	-.0391	-.0402	-.0413	-.0391	.999.9999	-.0495	-.0489	-.0478	-.0478	-.0478	.999.9999	.999.9999	.999.9999	.999.9999
	.0337	-.0354	.0370	-.0380	-.0424	-.0419	-.0446	-.0451	-.0451	-.0457	.0514	-.0538	-.0451	.0101	-.0305	-.0440	.0587	-.0581	-.0495	-.0554	.2555
	-.0288	-.0245	-.0212	-.0207	-.0446	-.0462	-.0451	-.0468	.0508	.3135	.0514	.0460	-.0451	-.0147	-.0305	-.0440	.0123	-.0006	.0303	-.0136	.1301
	.2336	.2724	.2891	.2653	.2701	.3063	.3037	.3059	.7272	.1768	.1768	.7226	.2733	.1105	.5750	.4189	.7050	.8402	.4855	.4775	
	.5378	.5978	.6233	.5653	.6665	.7292	.7300	.7300	.10953	.10953	.10953	.10953	.10953	.10953	.10953	.10953	.10953	.10953	.10953	.10953	
	.6610	.7348	.7275	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	.6610	
	.0188	.0465	.0487	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	.0188	
	.0493	.0481	.0552	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	.0145	
	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	
	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	.1203	
	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	.0058	
	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	-.0039	

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING (R11035) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 140.000 QIPSF1 = 3.0700 P3 = 34.090 P = .31000 RM/L = 3.6000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.1132	.0770	.0499	.0754	.1723
.050	.0897	.0681	.0770	.0436	.0803	.1889
.074	.1070	.0593	.0593	.0362	.0917	.2000
.098	.0897	.0520	.0338	.0967	.2078	.6928
.111	.0733	.0483	.0461	.1258	.3802	.7330
.139	.0719	.0568	.0558	.1023	.6044	.4047
.168	.0606	.0631	.0606	.1784	.6322	.0536
.191	.0520	.0758	.0606	.1023	.4083	.0614
.255	.0511	.0198	.0631	.0832	.4083	.0540
.244	.0398	.0772	.0769	.1851	.6302	.0527
.392	.0078	.0078	.0721	.1922	.6483	.0261
.667	.999	.999	.0662	.3726	.7544	.0463
.702	.0023	.0593	.350	.1385	.7027	.0299
.724	.0061	.0077	.0198	.0539	.7695	.0186
.744	.0022	.0022	.0136	.1750	.1700	.999
.755	.0002	.0002	.1032	.15822	.17624	.1143
.869	.0035	.0035	.0690	.6945	.8202	.0742
.902	.999	.999	.0299	.4029	.8616	.0337
.923	.0072	.0072	.0261	.3298	.7199	.0262
.945	.0022	.0022	.0624	.1759	.5330	
.982	.3399	.3399	.0234	.1989	.3853	
			.2545		1.3214	

MSFC TWT 503 (5A28F) SRB - CLEAN ATTACH RING (R11040) (22 AUG 75)

REFERENCE DATA

SRF = 115.2600 50.FT. XMRP = 1044.0000 IN.
 LRF = 146.0000 IN. YMRP = .0000 IN.
 ORF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 140.000 Q(PSF) = 7.1300 PO = 79.090 P = .72000 RM/L = 8.1000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0016	-.0180	-.0294	.0355	.1572
.050	-.0125	-.0202	-.0310	.0513	.1775
.074	-.0049	-.0245	-.0337	.0621	.1857
.098	-.0120	-.0277	-.0343	.0706	.1898
.111	-.0180	-.0381	.0184	.3732	.7015
.139	-.0202	-.0370	.0294	.3913	.7289
.154	-.0245	-.0386	.0256	.3933	.7346
.191	-.0277	-.0196	.0267	.1476	.7286
.255	-.0294	-.0408	.0096	.3951	.7305
.344	-.0348	-.0206	.0347	.1481	.7449
.392					.7522
.667	.999.9999	-.0490	-.0023	.3575	.7051
.702	-.0462	-.0266	-.0131	.1271	.7598
.724	-.0452	-.0491	-.0250	.0158	.1271
.744	-.0392	-.0333	-.0448	.4566	.1347
.755	-.0441999.9999	-.0485	-.0562	.2801	1.5071
.869	-.0463	-.0512	-.0056	.3800	.8009
.902	.999.9999	-.0529	.0002	.3164	.8405
.923	-.0463	-.0479	-.0104	.1507	.6879
.945	-.0485	-.0495	-.0370	.1784	.3200
.982	.3283		.2397		.3828
					1.3031

.3667 -.0053 -.0315
 .3922 .0047 -.0310
 .3909 .0046 -.0337
 .0041
 .0014
 .0008
 .0035
 -.0068
 999.9999
 .1121
 .0644

-.0299
 -.0365

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING (R11042) (22 AUG 75)

REFERENCE DATA

SREF	=	116.2600	SO.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

RN-5CH	2.000	PHI	•	.000
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MACH () =	3.760	ALPHA () =	149.000	O(PSF) =	7.1500	PO	=	79.220	P	=	.72000	RN/L	=	8.0000
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SECTION 115RB

DEPENDENT VARIABLE CP

1141A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	027	0061	-0453	-0480	-.0122	-.0461
050	-.0420		-.0447	-.0490	-.0052	-.0526
074	.0228		-.0480	-.0501	.0007	-.0564
098	-.0398		.0479	-.0517	.0093	-.0683
111	-.0463	-.0507	-.0523	-.0517	.0856	.3765
139	-.0474	-.0496	-.0534	-.0507	.0943	.4315
168	-.0485	-.0501	-.0528	-.0523	.2432	.4532
191	-.0485	-.0490	-.0534	-.0534	.0905	.4575
255	-.0497		-.0523	-.0512	.1003	.4526
344	-.0469	-.0501	-.0545	-.0133	.2464	.4559
392	999.9999		-.0528	-.0139	.1192	.4613
667	-.0566			-.0241		.4635
702	-.0582	-.0144	-.0512	-.0317	.2588	.5051
724	-.0328	-.0582	-.0463	-.0517	.0726	.4985
744	-.0279	.744	-.0433	-.0261	-.0095	.4878
755	-.0371999.9999		-.0485	.0115	.2437	.9468
869	-.0409		-.0555	-.0139	.1636	.5441
902	999.9999		-.0561	-.0112	.2145	.4088
923	-.0507		-.0555	-.0328	.2258	.4342
945	-.0545		-.0610	-.0453	.0754	.1858
982	.2929			-.2740	.0597	.1663
						.8608

UR 11043) (22 AUG 75)

REFERENCE DATA

SREF	=	116.2600	SO.FT.	XMRP	=	1044.0000	IN.	
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.	
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.	
SCALE	=	.0055						
RM-SCH	=							1.000
PHI	=							.000

PARAMETRIC DATA

BN-SCH	1.000	PHI	1.000
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PN/L • 3.5000

DEPENDENT VARIABLE CP

SECTION ()	SRB	DEPENDENT VARIABLE CP
0000	23	5000
0000	45	0000
0000	67	5000
0000	90	0000
0000	112	5000
0000	135	0000
0000	157	5000
0000	180	0000
0000	270	0000
0000	315	0000

X/L	0.027	0.0668	0.0628	0.0414	0.0237	0.0236
0.050	0.0742	0.0564	0.0362	0.0149	0.0163	0.0149
0.074	0.0817	0.0502	0.0274	0.0124	0.0161	0.0124
0.098	0.0716	0.0414	0.0236	0.0162	0.0212	0.0212
0.111	0.0603	0.0464	0.0936	0.1005	0.1876	0.1876
0.139	0.0564	0.0515	0.0691	0.0778	0.1788	0.1788
0.168	0.0589	0.0176	0.0540	0.0464	0.1811	0.1811
0.191	0.0426	0.0679	0.0602	0.0905	0.1813	0.1813
0.255	0.0426	0.0186	0.0540	0.1085	0.2028	0.2028
0.344	0.0413	0.0679	0.0464	0.0994	0.2070	0.2070
0.392	0.0667	0.0515	0.0515	0.1876	0.2051	0.2051
0.667	0.0077	0.0135	0.0967	0.1549	0.0031	0.0031
0.702	0.0040	0.0376	0.0111	0.0275	0.0053	0.0053
0.724	0.0077	0.0452	0.0014	0.4751	0.999	0.999
0.744	0.0353	0.0039	0.1120	0.4348	0.0162	0.0162
0.755	0.0161	0.0039	0.089	0.2305	0.0174	0.0174
0.869	0.0111	0.0015	0.1359	0.2444	0.2570	0.2570
0.902	0.0052	0.0174	0.1093	0.1624	0.0274	0.0274
0.923	0.0060	0.0452	0.0540	0.0855	0.0236	0.0236
0.955	0.0010	0.0012	0.0198	0.0527	0.0816	0.0816
0.982	0.1773	0.2141	0.2141	0.5192	0.5192	0.5192

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

(R11044) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 160.000 Q(PSF) = 7.1500 P0 = 79.210 P = .72000 RN/L = 8.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 57.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0172	-.0299	-.0358	-.0407	-.0326						
.050	-.0270	-.0299	-.0390	-.0455	-.0326						
.074	-.0237	-.0331	-.0423	-.0445	-.0309						
.098	-.0266	-.0374	-.0434	-.0374	-.0179						
.111	-.0326	-.0412	-.0139	.0075	.0767	-.0369	-.0369				
.139	-.0304	-.0390	-.0227	.0123	.0875	-.0336	-.0353				
.168	-.0336	-.0288	-.0293	.0079	.0869	-.0363	-.0369				
.191	-.0347	-.0266	-.0277	.0136	.1600	-.0374					
.255	-.0326	-.0390	-.0266	.0897	.1914						
.344	-.0217	-.0172	-.0271	.0153	.1626						
.392	999.9999	-.0407	-.0152	.0810	.1924	-.0358					
.667	999.9999	-.0439	-.0390		.1768	-.0179					
.702	-.0439	-.0324	-.0455		.1708	-.0439					
.724	-.0553	-.0569	-.0526	-.0066	.1536	999.9999					
.744	.0237	-.0131	-.0171	-.0363	-.0049	.0231					
.755	-.0163	999.9999	-.0076	.0599	.4814	.0231					
.869	-.0217	-.0374	-.0076	.0599	.1643	-.0060					
.902	999.9999	-.0434	-.0071	.1233	.2192						
.923	-.0450	-.0526	-.0315	.1124	.1065						
.945	-.0499	-.0574	-.0418	.0064	.0463	-.0390					
.982	.1670			.0123	.0480	-.0396					
					.4706						

UNCLASSIFIED SOURCE DATA. MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

1045) (22 AUG 75)

PARAMETRIC DATA

PN-SCH	PHI	
1.000	1.000	
		.000

REFERENCE DATA

-	SREF	=	116.2600	SQ.FT.	XMRP	=	1044.0000	IN.
-	LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
-	BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
-	SCALE	=	.0055					

MACH () = 3.760 ALPHA () = 169.900 Q(PSF) = 3.0700 PO = 34.070

SECTION 115RB

THEIA

X/L	0.27	0.661	0.426	0.228	0.180	0.117
0.50	0.497	0.391	0.178	0.092	0.046	-
0.74	0.573	0.315	0.129	0.054	0.071	-
0.98	0.435	0.227	0.142	0.033	0.058	-
1.11	0.451	0.353	0.291	0.369	0.592	0.580
1.39	0.479	0.441	0.441	0.428	0.632	0.668
1.68	0.403	0.516	0.466	0.479	0.394	0.684
1.91	0.353	0.577	0.502	0.200	0.400	0.730
2.55	0.341	0.547	0.454	0.585	0.790	0.633
3.44	0.316	0.547	0.378	0.382	0.634	0.634
3.92	0.999	0.004	0.014	0.724	0.785	0.609
6.67	0.091	0.398	0.046	0.0307	0.584	0.521
7.02	0.071	0.134	0.016	0.042	0.573	0.457
7.24	0.043	0.458	0.310	0.083	0.033	0.071
7.44	0.370	0.999	0.281	0.734	0.555	0.580
7.55	0.143	0.054	0.256	0.444	0.0948	0.17E
8.69	0.999	0.004	0.281	0.685	0.1037	0.1037
9.02	0.071	0.398	0.117	0.696	0.0935	0.0935
9.23	0.159	0.058	0.178	0.164	0.351	0.351
9.45	0.109	0.022	0.022	0.089	0.202	0.202
9.82	1.969	0.1956	0.1956	0.3131	0.3131	0.3131

(R11046) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

REFERENCE DATA

SRF = 116.2600 50.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BRF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = 3.760 ALPHA (1) = 169.900 DIPSF = 7.1500 PO = 79.220 P = .72000 RN/L = 8.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.55	3.44	3.92	6.67	7.02	7.24	7.44	7.55	8.69	9.02	9.23	9.45	9.82
0.27	-.0174	-.0276	-.0347	-.0369	-.0444	-.0477	-.0504	-.0520	-.0528	-.0536	-.0540	-.0548	-.0552	-.0556	-.0560	-.0564	-.0568	-.0572	-.0576	-.0580	-.0584
0.50	-.0250	-.0304	-.0396	-.0444	-.0477	-.0504	-.0520	-.0528	-.0536	-.0540	-.0548	-.0552	-.0556	-.0560	-.0564	-.0568	-.0572	-.0576	-.0580	-.0584	-.0588
0.74	-.0244	-.0347	-.0423	-.0477	-.0504	-.0520	-.0528	-.0536	-.0540	-.0548	-.0552	-.0556	-.0560	-.0564	-.0568	-.0572	-.0576	-.0580	-.0584	-.0588	-.0592
0.98	-.0298	-.0401	-.0450	-.0504	-.0520	-.0528	-.0536	-.0540	-.0548	-.0552	-.0556	-.0560	-.0564	-.0568	-.0572	-.0576	-.0580	-.0584	-.0588	-.0592	-.0596
1.11	-.0119	-.0222	-.0276	-.0331	-.0369	-.0401	-.0423	-.0444	-.0468	-.0488	-.0504	-.0520	-.0536	-.0552	-.0568	-.0584	-.0596	-.0608	-.0620	-.0632	-.0644
1.39	-.0076	-.0174	-.0222	-.0276	-.0331	-.0369	-.0401	-.0423	-.0444	-.0468	-.0488	-.0504	-.0520	-.0536	-.0552	-.0568	-.0584	-.0596	-.0608	-.0620	-.0632
1.68	-.0093	-.0109	-.0131	-.0152	-.0179	-.0206	-.0234	-.0262	-.0290	-.0318	-.0346	-.0374	-.0402	-.0430	-.0458	-.0486	-.0514	-.0542	-.0570	-.0598	-.0626
1.91	-.0120	-.0087	-.0125	-.0141	-.0152	-.0163	-.0174	-.0185	-.0196	-.0207	-.0218	-.0229	-.0240	-.0251	-.0262	-.0273	-.0284	-.0295	-.0306	-.0317	-.0328
2.55	-.0076	-.0174	-.0234	-.0262	-.0290	-.0318	-.0346	-.0374	-.0402	-.0430	-.0458	-.0486	-.0514	-.0542	-.0570	-.0598	-.0626	-.0654	-.0682	-.0710	-.0738
3.44	-.0049	-.0076	-.0141	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142	-.0142
3.92	999.9999	-.0158	-.0325	-.0374	-.0417	-.0462	-.0504	-.0548	-.0592	-.0636	-.0680	-.0724	-.0768	-.0812	-.0856	-.0900	-.0944	-.0988	-.1032	-.1076	-.1120
6.67	999.9999	-.0315	-.0374	-.0417	-.0462	-.0504	-.0548	-.0592	-.0636	-.0680	-.0724	-.0768	-.0812	-.0856	-.0900	-.0944	-.0988	-.1032	-.1076	-.1120	-.1164
7.02	-.0022	-.0060	-.0139	-.0174	-.0206	-.0234	-.0262	-.0290	-.0318	-.0346	-.0374	-.0402	-.0430	-.0458	-.0486	-.0514	-.0542	-.0570	-.0598	-.0626	-.0654
7.24	-.0417	-.0423	-.0431	-.0437	-.0442	-.0447	-.0452	-.0457	-.0462	-.0467	-.0472	-.0477	-.0482	-.0487	-.0492	-.0497	-.0502	-.0507	-.0512	-.0517	-.0522
7.44	0.534	0.551	0.569	0.583	0.594	0.604	0.614	0.624	0.634	0.644	0.654	0.664	0.674	0.684	0.694	0.704	0.714	0.724	0.734	0.744	0.754
7.55	0.388995	9999	0.139	0.074	0.022	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8.69	-.0033	-.0174	-.0206	-.0234	-.0262	-.0290	-.0318	-.0346	-.0374	-.0402	-.0430	-.0458	-.0486	-.0514	-.0542	-.0570	-.0598	-.0626	-.0654	-.0682	-.0710
9.02	999.9999	-.0282	-.0325	-.0374	-.0417	-.0462	-.0504	-.0548	-.0592	-.0636	-.0680	-.0724	-.0768	-.0812	-.0856	-.0900	-.0944	-.0988	-.1032	-.1076	-.1120
9.23	-.0461	-.0493	-.0522	-.0555	-.0588	-.0620	-.0654	-.0688	-.0722	-.0756	-.0790	-.0824	-.0858	-.0892	-.0926	-.0960	-.0994	-.1028	-.1062	-.1096	-.1130
9.45	-.0558	-.0520	-.0482	-.0444	-.0406	-.0368	-.0330	-.0292	-.0254	-.0216	-.0178	-.0140	-.0102	-.0064	-.0026	0.0012	0.0050	0.0088	0.0126	0.0164	0.0202
9.82	1.980	-.0520	-.0482	-.0444	-.0406	-.0368	-.0330	-.0292	-.0254	-.0216	-.0178	-.0140	-.0102	-.0064	-.0026	0.0012	0.0050	0.0088	0.0126	0.0164	0.0202

PARAMETRIC DATA

RN-SCM = 2.000 PHI = .000

MSFC TWT 603 (5A28F) SRB - CLEAN ATTACH RING

(R11047) (22 AUG 75)

REFERENCE DATA

SRF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.

LREF = 146.0000 IN. YMRP = .0000 IN.

BRF = 146.0000 IN. ZMRP = .0000 IN.

SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 179.900 O(PSF) = 3.0700 PO = 34.020 P = .31000 RN/L = 3.5000

SECTION (1)SRB

DEPENDENT VARIABLE CP

114ETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.027	.1013	.0083	-.0121	-.0121	-.0147	-.0109	-.0058				
	.050	-.0020	-.0121	-.0147	-.0147	-.0185	-.0185	-.0146				
	.074	.1277	-.0160	-.0159	-.0197	-.0197	-.0197	-.0235				
	.098	-.0033	-.0247	-.0248	-.0248	-.0248	-.0248	-.0273				
	.111	.0042	.0029	.0029	.0003	.0080	.0080	.0168	.0067	.0003	.0004	
	.139	.0092	.0091	.0117	.0231	.0080	.0154	.0255	.0180	.0143	.0129	
	.168	.0091	.0104	.0091	.0092	.0054	.0154	.0281	.0255	.0091	.0143	
	.191	.0067	.0117	.0105	.0067	.0155	.0154	.0344	.0217	.0079	.0143	
	.255	.0130	.0143	.0080	.0016	.0950	.0154	.0230	.0230			
	.344	.0117	.0130	.0080	.0054	.0130	.0433	.0243	.0056	.0130		
	.392		.0091	.0016	.0130	.0130	.0130	.0256	.0079	.0079		
	.667	.999	.9999	.0016	.0016	.0016	.0130	.0129	.0042			
	.702	.0016	.0861	.0105	-.0058	.0116	.1240	.0080	999.9999			
	.724	-.0273	-.0185	.1114	-.0260	-.0184	-.0223	-.0235	.0912	.0975		
	.744	.0936	.0975	.1011	.0973	.1013	.1013	.0912	.0595	.0508		
	.755	.0584	.999.9999	.0534	.0570	.0571	.0564	.0595	.1404			
	.869	.0343	.0344	.0357	.0357	.0381	.0381	.1404	.0483			
	.902	.999	.9999	.0017	.0054	.0054	.0105	.0483	.0045	-.0247		
	.923	-.0298	-.0323	-.0197	-.0197	-.0210	-.0210	-.0045	-.0184	-.0273		
	.945	-.0336	-.0361	-.0286	-.0286	-.0247	-.0247	-.0184				
	.982	.2110		.2261	.2261			.2198				

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TABLE 1. TABULATED SOURCE DATA, HSTC TWT 803 (SAGEF)

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MSFC TWT 603 (SA28F) SR0 - CLEAN ATTACH RINO (R11040) (22 AUG 75)

REFERENCE DATA

XMRP	=	1044.0000	IN.	
YMRP	=	.0000	IN.	
ZMRP	=	.0000	IN.	
SCALE = .0055				

MACH (1) = 3.750 ALPHA (1) = 179.900 Q(PSF) = 3.0700 P0 = 34.040 P = .31000 RM/L = 3.6000

SECTION 1, SARB

DEPENDENT VARIABLE CP

ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

TABULATED SOURCE DATA, MSFC TWT 603 (5A28F)

(R11049) (22 AUG 75)

DATE 07 MAR 77

MSFC TWT 603 (5A28F) SRB - CLEAN ATTACH RING

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000

RN/L = 3.6000

P = .31000

PO = 34.020

PIPSF = 3.0700

ALPHA (1) = 179.920

MACH (1) = 3.760

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

DEPENDENT VARIABLE CP

SECTION (1) SRB
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0891	.0589	.0312	.0199	.0162			
	.050	.0677	.0450	.0224	.0111	-.0001			
	.074	.0791	.0351	.0174	.0099	-.0052			
	.098	.0639	.0211	.0073	-.0014	-.0127			
	.111	.0677	.0513	.0107	.0325	.0375	.0425	.0350	.0463
	.139	.0677	.0628	.0803	.0614	.0565	.0450	.0414	.0526
	.168	.0590	.0677	.0677	.0413	.0614	.0450	.0376	.0477
	.191	.0501	.0765	.0576	.0828	.0715			
	.255	.0425	.0338	.0552	.0351	.0389			
	.344	.0350		.0476	.0929	.0803			
	.392	.0728	.0627	.0450		.0376		.0153	
	.567	.999.9999	.0199	.0261	.0275	.0389		.0288	
	.702	.0162	.0501	.0225		.0212		.0187	
	.724	-.0052	.0450	.0010	.0136	.0136		.0124	
	.744	.1095	.1082	.1120	-.0090	-.0127	999.9999		
	.755	.0704	.0628	.0704	.1095	.1082		.1032	
	.869	.0464	.0426	.0464	.0615	.0679		.0653	
	.902	.999.9999	.0124	.0162	.0477	.0728			
	.923	-.0115	-.0102	.0173	.0162	.0463		.0035	
	.945	-.0165	-.0127	-.0027	.0073	.0198		-.0052	
	.982	.2217	-.0127	.2305	.0009	.0072			
						.2330			

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING (R11050) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 50.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 179.900 Q(PSF) = 7.1500 P0 = 79.220 P = .72000 RN/L = 8.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 101.2500 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0101	-.0347	-.0293	-.0260	-.0239
.050	-.0423	-.0439	-.0423	-.0369	-.0342
.074	.0155	-.0482	-.0477	-.0439	-.0423
.098	-.0482	-.0520	-.0547	-.0488	-.0493
.111	-.0120	-.0055	-.0141	-.0071	-.0006
.139	-.0028	-.0011	-.0082	-.0028	-.0071
.168	-.0011	-.0049	-.0044	-.0033	-.0025
.191	-.0001	-.0076	-.0055	-.0076	-.0042
.255	.0058	.0112	-.0141	.0020	.0063
.344	.0004	-.0147	-.0066	.0269	.0080
.392			-.0033		.0096
.667	.999, 9999	.0015	-.0055	.0004	-.0001
.702	-.0055	.0237	-.0130	-.0172	-.0060
.724	-.0471	-.0385	.0128	-.0488	-.0412
.744	.1178	.1102	.1108	.1059	.1107
.755	.0453, 999, 9999	.0485	.0453	.0518	.0459
.869	.0296	.0242	.0242	.0258	.0648
.902	.999, 9999	-.0006	.0004	-.0001	.0242
.923	-.0520	-.0531	-.0493	-.0428	-.0309
.945	-.0558	-.0558	-.0542	-.0455	-.0412
.982	.1985		.2088		.2103

999, 99999

.0055

.1172

.0480

.0520

-.0520

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TABULATED SOURCE DATA. MSFC TWT 603 (5A28F)

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(R11051) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

PARAMETRIC DATA

BN-SCH - 1.000 PH1 - .000

SREF	=	116.2600	SO.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

MACH () =	3.750	ALPHA () =	178.920	O(PSS) =	3.0700	PO =	34.010	P =	.31000	AN/L =	3.6000
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DEPENDENT VARIABLE CP

SECTION 115RB
BRS 115RB NO 11335

THEFTA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

XX 71

0.07	.0932	.0590	.0325	.0174	.0187
.050	.0679	.0502	.0250	.0073	.0035
.074	.0831	.0389	.0162	.0086	-.0014
.098	.0841	.0262	.0060	.0027	-.0102
.111	.0679	.0552	.1046	.0552	.0452
.139	.0691	.0414	.0855	.0300	.0389
.168	.0759	.0522	.0653	.0362	.0426
.191	.0740	.0363	.0704	.0351	.0414
.255	.0805	.0641	.0628	.0830	.0729
.344	.0452	.0325	.0552	.0338	.0376
.392	.0742	.0679	.0515	.1033	.0817
.667	.999	.0225	.0489	.0262	.0389
.702	.0135	.0617	.0250	.0136	.0225
.724	-.0052	.0452	.0187	.0077	.0554
.744	.1006	.0478	-.0027	-.0077	-.0115
.755	.1057	.1107	.1082	.1082	.1107
.869	.999	.0641	.0691	.0628	.0704
.932	.0426	.0641	.0477	.0515	.0716
.945	.999	.0414	.0174	.0199	.0781
.983	.0135	.0124	.0187	.0086	.0489
.992	-.0115	-.0115	.0039	.0023	.0225
.993	-.0153	-.0140	-.0039	.0023	.0099
.992	.2192	.2292	.2292	.2318	.2318

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TABULATED SOURCE DATA. MSFC TMT 603 (SA28F)

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MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11052) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = .608 ALPHA (1) = 70.000 O(PSF) = 3.6400 PO = 18.030 P = 14.040 RN/L = 4.1000

PARAMETRIC DATA

RN-SCH = 1.000 PMI = .000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-1.0116	-1.9429	-1.9020	-1.2625	1.0354
.050	-1.7139	-1.6176	-1.5560	-1.2027	1.0865
.074	-1.6616	-1.3459	-1.2155	-1.1313	1.1172
.098	-1.6448	-1.1236	-1.0944	-1.0169	1.1373
.111	-1.5316	-1.3892	-1.2618	-1.5497	1.1446
.139	-1.8384	-1.9774	-1.9336	-1.9231	1.1029
.168	-1.7497	-1.8529	-1.8050	-1.8050	1.0745
.191	-1.6947	-1.7632	-1.6979	-1.6979	1.0664
.255	-1.5322	-1.5259	-1.4155	-1.4155	1.0253
.344	-1.4210	-1.4113	-1.3481	-1.3481	1.0346
.392	999.9999	999.9999	999.9999	999.9999	1.0315
.667	999.9999	999.9999	999.9999	999.9999	1.0078
.701	999.9999	999.9999	999.9999	999.9999	1.0144
.724	999.9999	999.9999	999.9999	999.9999	1.1005
.744	999.9999	999.9999	999.9999	999.9999	1.1368
.755	999.9999	999.9999	999.9999	999.9999	1.0139
.859	999.9999	999.9999	999.9999	999.9999	1.0153
.902	999.9999	999.9999	999.9999	999.9999	1.1045
.923	999.9999	999.9999	999.9999	999.9999	1.1172
.945	999.9999	999.9999	999.9999	999.9999	1.0310
.982	999.9999	999.9999	999.9999	999.9999	.5225

22 AUG 75 14 13:41
 22 AUG 75 14 13:41

MSFC TWT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11053)

MACH (2) = .904 ALPHA (1) = 70.000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.4997	-.8036	-.4904	999.9999	-.2328	.8688	1.1248	-.4980
	.392			999.9999			1.1193	-.4864	
	.667	999.9999	-.4181		999.9999	.1957	1.0882	-.4822	
	.702	-.4170	-.4092	-.3965	999.9999	-.1891	.8375	-.4437	
	.724	-.4084	-.3978	-.3632	999.9999	-.2582	.9426	999.9999	
	.744	-.3931	-.3959	-.4066	999.9999	-.3024	.9500	-.5781	
	.755	-.4021	999.9999	-.4121	999.9999	-.1810	.8442	-.4518	
	.869	-.3729		999.9999		.2263	1.1034		
	.902	999.9999	-.3632	999.9999		.2092	1.0876		
	.923	-.3327	-.4145		999.9999	.1883	1.1962	-.3999	
	.945	-.3196	-.3797	-.8036		.4015	1.2036	-.5511	
	.982	-.2917		-.7761			.2486		

MACH (3) = 1.196 ALPHA (1) = 70.000 Q(PSF) = 9.1300 PO = 22.010 P = 9.1300 RN/L = 6.7000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.7717	-.7680	-.5810	.6027	1.3338			
	.050	-.7381	-.7492	-.5498	.6233	1.3593			
	.074	-.6457	-.6962	-.5339	.6414	1.3912			
	.098	-.5863	-.6218	-.3946	.6763	1.4078			
	.111	-.6016	-.6103	-.6351	.2147	1.3973	.6680	-.4814	-.5629
	.139	-.5462	-.5681	-.5484	.1629	1.1613	.6026	999.9999	-.5722
	.168	-.5128	-.5292	-.5692	.1334	1.1424	.5752	-.5270	-.5114
	.191	-.4915	-.4987	-.5134	.1559	1.1274	.3354	-.5258	
	.255	-.4530	-.4546	999.9999	.5582	1.3168			
	.344	-.3697	-.3814	-.3794	.1741	1.0917	1.2986	-.3651	
	.392			999.9999			1.2966	-.3288	
	.667	999.9999	-.5140	999.9999	.5314	1.2709		-.4657	
	.702	-.4608	-.4637	-.4587	.1940	1.0690	1.2785	-.4590	
	.724	-.4426	-.4347	-.3985	.1282	1.1575	1.3638	999.9999	
	.744	-.4558	-.4581	-.5607	.0617	1.1695	1.3934	-.5369	
	.755	-.4519	999.9999	-.5243	.1876	1.0715	1.2834	-.5202	
	.869	-.4300		999.9999	.5571	1.2723			
	.902	999.9999	-.4128	999.9999	.5540	1.3645		-.4002	
	.923	-.3977	-.4086	-.3742	.5306	1.3715	1.2923	-.4028	
	.945	-.3872	-.3979	-.4496	.6959				
	.982	-.3544		-.5113			.7118		

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(R11053)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 70.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.069	-.1102										
.902	999.9999	-.1143	999.9999	.9177	1.6566						
.923	-.1144	-.1144	999.9999	1.0734	1.8986						
.945	-.1156	-.1059	.0942	1.0172	.9219					.0208	
.982	-.0961	-.1150	.0688	.9990	.7419					.0598	
			-.1284		.9474						

MACH (6) = 3.480 ALPHA (1) = 70.000 Q115F = 6.8600 PO = 60.000 P = .81000 RN/L = 7.0000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.027	-.0356										
.050	-.0441	-.0497	.0861	1.0459	1.7947						
.074	-.0351	-.0542	.0946	1.0211	1.8024						
.098	-.0424	-.0581	.0844	.9951	1.8086						
.111	-.0480	-.0565	.0798	.9714	1.7942						
.139	-.0486	-.0559	.1300	.9066	1.6881						
.168	-.0491	-.0632	.1363	.8594	1.6554						
.191	-.0514	-.0655	.1396	.8750	1.6346						
.255	-.0519	-.0627	.1416	.8530	1.6260						
.344	-.0519	-.0570	.1401	.8530	1.6120						
.392	-.0519	-.0356	.1401	.8530	1.6024						
.667	999.9999	-.0638	.1401	.8530	1.5962						
.702	-.0604	-.0463	.1401	.8530	1.5889						
.724	-.0598	-.0660	.1401	.8530	1.5837						
.744	-.0717	-.0711	.1401	.8530	1.5754						
.755	-.0734	999.9999	.1401	.8530	1.5671						
.859	-.0644	-.0660	.1401	.8530	1.5589						
.902	999.9999	-.0644	.1401	.8530	1.5507						
.923	-.0649	-.0559	.1401	.8530	1.5425						
.945	-.0644	-.0649	.1401	.8530	1.5343						
.982	-.0491	-.0723	.1401	.8530	1.5261						

MSFC TWT 603 (5A28F) SRB - ALL PROTUBERANCES
(R11054) (22 AUG 75)

REFERENCE DATA

SREF	=	115.2600	SO. FT.	XMRP	=	104.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

PN-SCH -	1.000	PHI	.	.000

MACH (1) =	.594	ALPHA (1) =	90.000	Q(PSF) =	3.5100	P0	=	18.010	P	=	14.190	RN/L	=	4.1000
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SECTION 1135

DEPENDENT VARIABLE CP

NETA
0.000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

(R11055) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - ALL PROTEUBERANCES

REFERENCE DATA

SREF	=	116.2600	SO. FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

RN-SCH -	2.000	PHI -	.000
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PARAMETRIC DATA

MACH () =	.601	ALPHA () =	90.000	Q(PSF) =	7.5300	P0	=	38.020	P	=	29.780	RN/L	=	8.7000
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SECTION 115RB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.7143	-.7001	-.8250	-.4462	.6772	
	.050	-.7633	-.7602	-.7659	-.4208	.7562	
	.074	-.7407	-.7478	-	-.3416	.8186	
	.098	-.6953	-.6478	-.9052	-.1677	.9704	
	.111	-.6663	-.6562	-.6717	-.6451	.9901	-.1716
	.139	-.6538	-.6062	-.5870	-.5592	.8786	-.9639
	.168	-.6016	-.5837	-.6134	-.0348	.1010	-.1820
	.191	-.5737	-.5468	-.6134	-.5625	.0926	-.7541
	.295	-.5217	-.5378	-.5612	-.5572	.0994	-.7298
	.344	-.4574	-.4542	-.5993	-.0090	.1045	-.12036
	.392	999.9999	999.9999	999.9999	-.3880	.1034	-.4823
	.667	999.9999	999.9999	999.9999	-.0086	.1003	-.4697
	.702	-.5222	-.4878	-.5044	-.3993	.1090	-.5570
	.724	-.4931	-.4894	-.4069	-.3492	.1050	-.11639
	.744	-.6054	-.5797	-.7363	-.4992	.1071	999.9939
	.755	-.5671	999.9999	-.7973	-.4134	.0952	-.8365
	.869	-.6478	999.9999	-.7973	-.4134	.0994	-.6436
	.902	999.9999	999.9999	999.9999	-.0292	.1073	
	.923	-.6505	-.6614	999.9999	-.2152	.1102	-.17977
	.945	-.6799	-.6655	999.9999	-.1741	.1084	-.15748
	.982	-.6799	-.6655	999.9999	-.3666	.1088	
				999.9999		.0560	

MACH (2) =	.901	ALPHA (1) =	90.000	Q(PSF) =	7.3800	PO	=	22.020	P	=	13.010	RN/L	=	6.3000
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SECTION () SRB

DEPENDENT VARIABLE CP

THE TA
0000 22 5000 45 0000 67 5000 90 0000 12 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

X/L	5915	5916	5941	2147	1668	8938	2110	7406	6064
.027	-	-	-	-	-	1.0913	2.110	-	-
.050	-	-	-	-	-	1.8720	2.330999	9.999	-
.074	-	-	-	-	-	1.9464	2.319	-	-
.098	-	-	-	-	-	1.0221	2.262	-	-
.111	-	-	-	-	-	1.8938	2.296	-	-
.139	-	-	-	-	-	1.9106	2.319	-	-
.168	-	-	-	-	-	1.9721	2.296	-	-
.191	-	-	-	-	-	1.9177	2.296	-	-
.255	-	-	-	-	-	1.2347	2.296	-	-
.285	-	-	-	-	-	1.2347	2.296	-	-
.315	-	-	-	-	-	1.2347	2.296	-	-
.345	-	-	-	-	-	1.2347	2.296	-	-
.375	-	-	-	-	-	1.2347	2.296	-	-
.405	-	-	-	-	-	1.2347	2.296	-	-
.435	-	-	-	-	-	1.2347	2.296	-	-
.465	-	-	-	-	-	1.2347	2.296	-	-
.495	-	-	-	-	-	1.2347	2.296	-	-
.525	-	-	-	-	-	1.2347	2.296	-	-
.555	-	-	-	-	-	1.2347	2.296	-	-
.585	-	-	-	-	-	1.2347	2.296	-	-
.615	-	-	-	-	-	1.2347	2.296	-	-
.645	-	-	-	-	-	1.2347	2.296	-	-
.675	-	-	-	-	-	1.2347	2.296	-	-
.705	-	-	-	-	-	1.2347	2.296	-	-
.735	-	-	-	-	-	1.2347	2.296	-	-
.765	-	-	-	-	-	1.2347	2.296	-	-
.795	-	-	-	-	-	1.2347	2.296	-	-
.825	-	-	-	-	-	1.2347	2.296	-	-
.855	-	-	-	-	-	1.2347	2.296	-	-
.885	-	-	-	-	-	1.2347	2.296	-	-
.915	-	-	-	-	-	1.2347	2.296	-	-
.945	-	-	-	-	-	1.2347	2.296	-	-
.975	-	-	-	-	-	1.2347	2.296	-	-
1.005	-	-	-	-	-	1.2347	2.296	-	-
1.035	-	-	-	-	-	1.2347	2.296	-	-
1.065	-	-	-	-	-	1.2347	2.296	-	-
1.095	-	-	-	-	-	1.2347	2.296	-	-
1.125	-	-	-	-	-	1.2347	2.296	-	-
1.155	-	-	-	-	-	1.2347	2.296	-	-
1.185	-	-	-	-	-	1.2347	2.296	-	-
1.215	-	-	-	-	-	1.2347	2.296	-	-
1.245	-	-	-	-	-	1.2347	2.296	-	-
1.275	-	-	-	-	-	1.2347	2.296	-	-
1.305	-	-	-	-	-	1.2347	2.296	-	-
1.335	-	-	-	-	-	1.2347	2.296	-	-
1.365	-	-	-	-	-	1.2347	2.296	-	-
1.395	-	-	-	-	-	1.2347	2.296	-	-
1.425	-	-	-	-	-	1.2347	2.296	-	-
1.455	-	-	-	-	-	1.23			

(R11055)

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - ALL PROTOBERANCES

DATE 07 MAR 77

MACH (2) = .901 ALPHA (1) = 90.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THET, .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	.4533	.4497	.4480999.9999	.2134	.9837	1.2377	.4530
.392	.999.9999	.999.9999	.999.9999	.999.9999	.2682	.9757	1.2381	.5068
.667	.999.9999	.4722	.4837	.999.9999	.2145	.9629	1.2383	.4797
.702	.4763	.4837	.4837	.4632999.9999	.2145	.9629	1.2384	.4632
.724	.4462	.4538	.4538	.4459999.9999	.3496	.9600	1.2381	.999.9999
.744	.5510	.5442	.5442	.7462999.9999	.1721	.9564	1.2370	.7818
.755	.5408999.9999	.9999	.9999	.8274999.9999	.1249	.9564	1.2349	.7400
.869	.5361	.5429	.5429	.999.9999	.2559	.9564	1.2413	
.902	.999.9999	.5375	.5375	.999.9999	.1439	.9564	1.2456	
.923	.5354	.5476	.5476	.999.9999	.1998	.9564	1.2440	.1.0226
.945	.5300	.5401	.5401	.999.9999	.6360	.9564	1.2409	.1.1109
.982	.5075	.7307	.7307	.999.9999		.9564	1.1908	

MACH (3) = 1.194 ALPHA (1) = 90.000 QIPSF = 9.1300 PO = 22.010 P = 9.1500 RN/L = 6.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

THET, .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.5460	.5473	.5610	.3435	1.0253	.5634	.4518	.5511
.050	.5525	.5523	.5523	.5782	.4011	1.1010	.5837999.9999	.5503	
.074	.5361	.5429	.5429	.5811	.4424	1.1593	.5829	.4672	.5137
.098	.5235	.5336	.5336	.4114	.5300	1.2261		.4807	
.111	.5188	.5270	.5270	.4715	.5819	1.2800	.5634	.4518	
.139	.5096	.5144	.5144	.2336	.6032	1.3789	.5837999.9999	.5503	
.168	.4941	.4998	.4998	.9999	.6058	1.1791	.5829	.4672	
.191	.4820	.4860	.4860	.9999	.1228	1.1837	.5829	.4672	
.255	.4579	.4728	.4728	.999.9999	.6163	1.3958	.5829	.4672	
.344	.4200	.4380	.4380	.4378999.9999	.2047	1.4068	.5829	.4672	
.392	.999.9999	.4475	.4475	.999.9999	.6162	1.4015	.5829	.4672	
.667	.999.9999	.4475	.4475	.999.9999	.6162	1.4015	.5829	.4672	
.702	.4443	.4475	.4475	.4627999.9999	.2026	1.4031	.5829	.4672	
.724	.4419	.4465	.4465	.4480999.9999	.0984	1.4083	.5829	.4672	
.744	.4452	.4621	.4621	.4842999.9999	.2488	1.1785	.5829	.4672	
.755	.4492999.9999	.9999	.9999	.4807999.9999	.2888	1.1777	.5829	.4672	
.869	.5078	.5216	.5216	.999.9999	.6040	1.4048	.5829	.4672	
.902	.999.9999	.5152	.5152	.999.9999	.5158	1.4056	.5829	.4672	
.923	.5161	.5636	.5636	.999.9999	.5530	1.4104	.5829	.4672	
.945	.5023	.6505	.6505	.999.9999	.9121	1.4058	.5829	.4672	
.982	.4229	.5032	.5032	.999.9999	.1.3681	1.3681	.5829	.4672	

DATE 07 MAR 77

TABULATED SOURCE DATA, NSFC TWY 603 (5A286F)

(R11033)

MSFC TWT 603 (5A28F) SRB - ALL PROTRUSANCES

MACH (5) = 2.740 ALPHA (1) = 90.000

SECTION : 11SR8

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

X/L	.869	-.1150	-.1186	999.9999	.9261	1.7587
	.902	999.9999	-.1228	999.9999	.8597	1.7658
	.923	-.1156	-.1071	.0305	.8527	1.7593
	.945	-.1156	-.1174	.0129	1.0675	1.7773
	.982	-.0014	-.0105	-		1.8030

MACH (5) =	3.480	ALPHA (1) =	90.000	Q (P55) =	6.8600	P0	=	60.030	P	=	.81000	PN/L	=	7.0000
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SECTION 11 SRB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	0.27	-.0322	-.0463	.0223	.7833	1.5058			
	.050	-.0424	-.0492	.0296	.8088	1.5458			
	.074	-.0339	-.0531	.0318	.8092	1.5869			
	.098	-.0390	-.0554	.0991	.8612	1.6320			
	.111	-.0441	-.0542	-.0605	.9012	1.6951	.9016	.0645	-.0526
	.139	-.0475	-.0514	-.0531	.9511	1.7954	.9525999	.9999	-.0559
	.168	-.0514	-.0469	-.0542999	.9999	1.7954	.9632	.0658	-.0554
	.191	-.0525	-.0424	-.0520999	.9999	1.5555	.7981	.0576	
	.255	-.0531	-.0570	.999	.9750	1.7904			
	.344	-.0571	-.0413	-.0458999	.4073	1.7999		.0690	
	.392			.999		1.8041		.0697	
	.667	.999	-.0616	.999	.9682	1.8016		.0797	
	.702	-.0610	-.0458	-.0542999	.4026	1.8044		.0521	
	.724	-.0594	-.0616	-.0413999	.9999	1.5390	999	.9999	
	.744	-.0700	-.0695	-.0644999	.4144	1.5362	.7993	.0837	
	.755	-.0672999	.9999	-.0700999	.4178	1.7976		.0285	
	.869	-.0650	-.0650	.999	.9424	1.7900			
	.902	.999	-.0678	.999	.8747	1.7967		.0448	
	.923	-.0627	-.0566	.0724	.8537	1.7798		.0619	
	.945	-.0638	-.0638	.0533	1.0065	1.7971			
	.982	-.0285		.0217		1.8021			

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 142

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11058) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

RM-SCH = 1.000 PHI = .000

PARAMETRIC DATA

MACH () = .599 ALPHA () = 110.000 Q(PSF) = 3.5500 PO = 18.020 P = 14.140 RM/L = 4.1000

SECTION (11SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.5708	-.6067	-.6264	-.5541	.3065
.050	-.4369	-.5311	-.6174	-.5750	.3475
.074	-.3112	-.3117	-.7141	-.4537	.4111
.098	-.2965	-.3296	-.3662	-.2890	.4758
.111	-.2979	-.3239	-.3358	-.2748	.4967
.139	-.3114	-.3314	-.3550	-.2808	.6017
.168	-.3300	-.3579	-.3426	-.0765	.6531
.191	-.3564	-.3751	-.3621	-.4340	.9507
.255	-.3975	-.4043	-.999	-.0531	.9775
.344	-.4299	-.4158	-.4144	-.3917	.9977
.392	.999	.999	.999	.7073	.0019
.667	.999	.999	.999	-.0616	.0338
.702	-.5245	-.5736	-.7275	-.4678	.10428
.724	-.5824	-.5750	-.7584	-.7365	.10431
.744	-.5934	-.5438	-.5962	-.3889	.999
.755	-.6385	.999	-.6000	-.3733	.0861
.869	-.8328	.999	.999	-.0988	.10626
.902	.999	.999	.999	-.2268	.10569
.923	-.7575	-.9554	-.14225	-.1756	.1313
.945	-.7582	-.7767	-.14626	.0314	.10120
.982	-.5271		-.12718		.10290
					.11143

MSFC TWT 603 (5A28F) SRB - ALL PROTRUDANCES

(R11057)

MACH (2) = .903 ALPHA (1) = 110.000

SECTION 1158B
DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

MACH (3) = 1.198 ALPHA (1) = 110.000 Q(PSE) = 9.1500 PO = 22.020 P = 9.1000 RN/L = 6.6000

SECTION () SRB

THEIA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 35.0000 57.5000 80.0000 102.5000 125.0000 147.5000 170.0000 192.5000 215.0000 237.5000 260.0000 282.5000 305.0000 327.5000 350.0000 372.5000 395.0000 417.5000 440.0000 462.5000 485.0000 507.5000 530.0000 552.5000 575.0000 597.5000 620.0000 642.5000 665.0000 687.5000 710.0000 732.5000 755.0000 777.5000 800.0000 822.5000 845.0000 867.5000 890.0000 912.5000 935.0000 957.5000 980.0000 1002.5000 1025.0000 1047.5000 1070.0000 1092.5000 1115.0000 1137.5000 1160.0000 1182.5000 1205.0000 1227.5000 1250.0000 1272.5000 1295.0000 1317.5000 1340.0000 1362.5000 1385.0000 1407.5000 1430.0000 1452.5000 1475.0000 1497.5000 1520.0000 1542.5000 1565.0000 1587.5000 1610.0000 1632.5000 1655.0000 1677.5000 1700.0000 1722.5000 1745.0000 1767.5000 1790.0000 1812.5000 1835.0000 1857.5000 1880.0000 1902.5000 1925.0000 1947.5000 1970.0000 1992.5000 2015.0000 2037.5000 2060.0000 2082.5000 2105.0000 2127.5000 2150.0000 2172.5000 2195.0000 2217.5000 2240.0000 2262.5000 2285.0000 2307.5000 2330.0000 2352.5000 2375.0000 2397.5000 2420.0000 2442.5000 2465.0000 2487.5000 2510.0000 2532.5000 2555.0000 2577.5000 2600.0000 2622.5000 2645.0000 2667.5000 2690.0000 2712.5000 2735.0000 2757.5000 2780.0000 2802.5000 2825.0000 2847.5000 2870.0000 2892.5000 2915.0000 2937.5000 2960.0000 2982.5000 3005.0000 3027.5000 3050.0000 3072.5000 3095.0000 3117.5000 3140.0000 3162.5000 3185.0000 3207.5000 3230.0000 3252.5000 3275.0000 3297.5000 3320.0000 3342.5000 3365.0000 3387.5000 3410.0000 3432.5000 3455.0000 3477.5000 3500.0000 3522.5000 3545.0000 3567.5000 3590.0000 3612.5000 3635.0000 3657.5000 3680.0000 3702.5000 3725.0000 3747.5000 3770.0000 3792.5000 3815.0000 3837.5000 3860.0000 3882.5000 3905.0000 3927.5000 3950.0000 3972.5000 3995.0000 4017.5000 4040.0000 4062.5000 4085.0000 4107.5000 4130.0000 4152.5000 4175.0000 4197.5000 4220.0000 4242.5000 4265.0000 4287.5000 4310.0000 4332.5000 4355.0000 4377.5000 4400.0000 4422.5000 4445.0000 4467.5000 4490.0000 4512.5000 4535.0000 4557.5000 4580.0000 4602.5000 4625.0000 4647.5000 4670.0000 4692.5000 4715.0000 4737.5000 4760.0000 4782.5000 4805.0000 4827.5000 4850.0000 4872.5000 4895.0000 4917.5000 4940.0000 4962.5000 4985.0000 5007.5000 5030.0000 5052.5000 5075.0000 5097.5000 5120.0000 5142.5000 5165.0000 5187.5000 5210.0000 5232.5000 5255.0000 5277.5000 5300.0000 5322.5000 5345.0000 5367.5000 5390.0000 5412.5000 5435.0000 5457.5000 5480.0000 5502.5000 5525.0000 5547.5000 5570.0000 5592.5000 5615.0000 5637.5000 5660.0000 5682.5000 5705.0000 5727.5000 5750.0000 5772.5000 5795.0000 5817.5000 5840.0000 5862.5000 5885.0000 5907.5000 5930.0000 5952.5000 5975.0000 5997.5000 6020.0000 6042.5000 6065.0000 6087.5000 6110.0000 6132.5000 6155.0000 6177.5000 6200.0000 6222.5000 6245.0000 6267.5000 6290.0000 6312.5000 6335.0000 6357.5000 6380.0000 6402.5000 6425.0000 6447.5000 6470.0000 6492.5000 6515.0000 6537.5000 6560.0000 6582.5000 6605.0000 6627.5000 6650.0000 6672.5000 6695.0000 6717.5000 6740.0000 6762.5000 6785.0000 6807.5000 6830.0000 6852.5000 6875.0000 6897.5000 6920.0000 6942.5000 6965.0000 6987.5000 7010.0000 7032.5000 7055.0000 7077.5000 7100.0000 7122.5000 7145.0000 7167.5000 7190.0000 7212.5000 7235.0000 7257.5000 7280.0000 7302.5000 7325.0000 7347.5000 7370.0000 7392.5000 7415.0000 7437.5000 7460.0000 7482.5000 7505.0000 7527.5000 7550.0000 7572.5000 7595.0000 7617.5000 7640.0000 7662.5000 7685.0000 7707.5000 7730.0000 7752.5000 7775.0000 7797.5000 7820.0000 7842.5000 7865.0000 7887.5000 7910.0000 7932.5000 7955.0000 7977.5000 8000.0000 8022.5000 8045.0000 8067.5000 8090.0000 8112.5000 8135.0000 8157.5000 8180.0000 8202.5000 8225.0000 8247.5000 8270.0000 8292.5000 8315.0000 8337.5000 8360.0000 8382.5000 8405.0000 8427.5000 8450.0000 8472.5000 8495.0000 8517.5000 8540.0000 8562.5000 8585.0000 8607.5000 8630.0000 8652.5000 8675.0000 8697.5000 8720.0000 8742.5000 8765.0000 8787.5000 8810.0000 8832.5000 8855.0000 8877.5000 8900.0000 8922.5000 8945.0000 8967.5000 8990.0000 9012.5000 9035.0000 9057.5000 9080.0000 9102.5000 9125.0000 9147.5000 9170.0000 9192.5000 9215.0000 92

X/L	027	- 4071	- 3941	.0020	.5943	
	.050	- 4185	- 4266	.0771	.6693	
	.074	- 3956	- 4041	.1321	.7344	
	.098	- 3737	- 3958	.2059	.7796	
	.111	- 3936	- 4152	.0287	.6356	.1695
	.139	- 3959	- 4024	.0203	.9344	.4018999.9999
	.168	- 4052	- 4299	.4698	.1776	.4337
	.191	- 4198	- 4341999.9999	.0724	.1982	.4093
	.255	- 4322	- 4385	.5077	.12231	
	.344	- 4335	- 4529	.1612	.12394	.4118
	.352	999.9999	- 4188	.5350	.12419	.5215
	.667	999.9999	- 4405		.12809	.4013
	.702	- 4202	- 4419999.9999	.1688	.12917	.4295
	.724	- 4515	- 4460999.9999	.0827	.12563	999.9999
	.744	- 4397	- 4966999.9999	.2558	.13348	
	.755	- 4522999.9999	- 4979999.9999	.3028	.13133	.4395
	.869	- 5543	- 5476	.5382	.13171	.4441
	.902	999.9999	- 5410	.4685	.13832	
	.923	- 5594	- 5620	.5403	.13044	.5442
	.945	- 5297	- 5927	.7055	.13132	.4295
	.982	- 5945	- 5066		.13814	
	.985	- 2205				

DATE 07 MAR 77

TABULATED SOURCE DATA. NSFC TWT 603 (SA2RF)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11057)

MACH (4) = 1.961 ALPHA (11) = 110.000 Q(PSE) = 10.970 PO = 30.020 P = 4.0700 RN/L = 7.5000

SECTION 115RB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	- 2455	- 2479	- 2564	2826	7691	- 2553
	.050	- 2483	- 2498	- 2383	3341	8347	- 2581
	.074	- 2507	- 2517	- 2347	3746	8894	- 2574
	.098	- 2539	- 2577	- 1364	4340	9430	
	.111	- 2567	- 2545	- 2980	4461	10290	4562 - 1552
	.139	- 2533	- 2570	- 2746	7025	13654	7135999 9999
	.168	- 2548	- 2526	- 2925999 9999	7276	12198	7436 - 10949
	.191	- 2559	- 2539	- 2889999 9999	2230	12265	- 1298
	.255	- 2638	- 2656	999 9999	7643	14215	
	.344	- 2806	- 2740	- 2863999 9999	2643	12476	- 1256
	.392	999 9999	- 2459	999 9999	7177	14356	- 1256
	.667	- 2492	- 2391	- 2821999 9999		14663	- 1344
	.702	- 2529	- 2507	- 2737999 9999	2650	14805	- 0999
	.724	- 2395	- 2412	- 2811999 9999	3494	9936	999 9999
	.744	- 2409999 9999	- 2651	- 2895999 9999	4169	13651	- 1270
	.755	- 2603	- 2975	999 9999	7197	15075	- 1143
	.869	999 9999	- 2620	- 1062	5119	14966	
	.902	- 2691	- 2976	- 1050	7268	14557	- 1114
	.923	- 2762		- 0920	8128	14570	- 0705
	.945	- 0185				14194	
	.982					16253	

MACH (5) = 2.740 ALPHA (1) = 110.000 Q1P5F) = 6.3700 PO = 30.020 P = 1.2100 RN/L = 5.2000

SECTION () 5RB

DEPENDENT VARIABLE CP

THETA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11057)

MACH (5) = 2.740 ALPHA (1) = 110.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1307										
.902	999.9999	-.1265	999.9999	.8022						1.6143	
.923	-.1277	-.1362	999.9999	.5718						1.0408	
.945	-.1301	-.1168	.0386	.7587						1.5374	-.0257
.982	.1452	-.1302	.0123	.7047						1.4583	.0330
			.0542							1.7514	

MACH (6) = 3.480 ALPHA (1) = 110.000 Q(PSF) = 6.8600 PO = 60.030 P = .81000 RN/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0266	-.0401									
.050	-.0339	-.0419	-.0340	.4150						.8838	
.074	-.0289	-.0469	-.0255	.4415						.9209	
.098	-.0368	-.0537	-.0109	.4612						.9502	
.111	-.0429	-.0599	-.0272	.3924						.8573	
.139	-.0452	-.0514	-.0571	.4084						1.2810	.6415
.168	-.0492	-.0503	-.0531	.3508						1.3452	1.0962
.191	-.0514	-.0447	-.0508	.3581						1.5610	1.3452
.255	-.0548	-.0395	-.0484	.3538						1.5756	1.3745
.344	-.0621	-.0390	-.0484	.8533						1.5762	1.3673
.392			-.0424	.3555						1.5802	1.5802
.667	999.9999		999.9999	.3555						1.5835	.0538
.702	-.0678	-.0683	999.9999	.8347						1.5813	.0544
.724	-.0667	-.0486	-.0531							1.6365	.0420
.744	-.0683	-.0695	-.0446	.3485						1.6748	.0668
.755	-.0706	-.0683	-.0638	.2392						1.8950	999.9999
.869	-.0712	-.0745	-.0627	.4595						1.5993	1.8326
.902	999.9999		999.9999	.4612						1.4438	1.6866
.923	-.0700	-.0762	999.9999	.8190						1.6603	1.1107
.945	-.0723	-.0627	999.9999	.5434						.8977	.0533
.982	.1845	-.0728	.0369	.6054						1.6177	.0420
			.0916							1.4506	
										1.7621	

C. 3

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11058) (22 AUG 75)

REFERENCE DATA

SREF	=	116.2600	SQ.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

BN-SCH	•	2.000	PMI	•	.000
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MACH (1) =	.598	ALPHA (1) =	130.100	Q(P5F) =	7.4700	PO	=	39.020	P	=	29.970	RN/L	=	0.8000
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SECTION 115RB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7/1X

027	-1846	-1949	-4600	0053
050	-2077	-2113	-4322	0247
074	-2580	-2573	-3739	0475
098	-2829	-3015	-3677	0194
111	-2970	-3056	-5287	-1025
139	-3223	-3093	-3203	3360
168	-3481	-3419	-3445	5613
191	-3687	-3512	-3389	5797
255	-4147	999,9999	-0254	6029
344	-4811	-4903	-3460	6156
392	999,9999	999,9999	-0668	6124
607	999,9999	999,9999	-4188	6512
702	-5570	-6291	-5280	6889
724	-6405	-6748	-1211	-0227
744	-6296	-4028	-0736	8351
755	-7280	-4383	-1834	7186
869	-8366	999,9999	-0339	6669
902	999,9999	999,9999	-5605	4689
923	-7918	-9937	0218	6950
945	-8084	-9662	-1134	5268
982	-3952	-1	-8950	9530

MACH (2) =	.904	ALPHA (1) =	130.100	O (PSF) =	7.4200	P0	=	22.020	P	=	12.950	RN/L	=	6.3000
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SECTION 11 SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7/8

027	-2584	-2838	-2E49	-4838	-1140
050	-2638	-2734	-3591	-0395	-
074	-2833	-2998	-2916	-4294	0022
098	-3048	-3243	-3184	-5128	-1038
111	-3169	-3299	-3338	-4624	-0300
139	-3286	-3389	-3331	-4284	-1150
168	-3504	-3549	-3560	-0978	-7456
191	-3628	-3668	-350499 9999	-0414	6076
255	-3979	-3902	-3543999 9999	-3802	6272
			999 999999	0107	6547
					-3304
					-3322
					-3390
					-1967999 9999
					-3443
					-3622
					-3966
					-4609

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11050)

MACH (2) = .904 ALPHA (1) = 130.100

SECTION 115RB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 35.0000 57.5000 80.0000 270.0000 315.0000

[illegible]

MACH (3) = 1.202

SECTION 11 NO 1135

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 35.0000 57.5000 80.000225.0000270.0000315.0000

X/L	.027	-.2606	-.2952	-.2978	-.3297	.0909
	.050	-.2695	-.2812	-.4171	-.2796	.1594
	.074	-.2773	-.2855	-.2948	-.2346	.1970
	.098	-.2930	-.3094	-.3149	-.3659	-.0186
	.111	-.3094	-.3159	-.3591	-.1647	.3293
	.139	-.3139	-.3244	-.3159	-.2826	.4572
	.168	-.3358	-.3363	-.323999	.9999	.7683
	.191	-.3438	-.3465	-.3423999	.9999	.8058
	.255	-.3733	-.3693	.999	.9999	.8146
	.344	-.3811	-.3684	-.4236999	.9999	.8274
	.392	.999	.9999	.999	.9999	.8306
	.667	.999	-.4077	.999	.9999	.8276
	.702	-.4093	-.4659	.999	.9999	.8773
	.724	-.5304	-.4971	-.4573999	.9999	.9544
	.744	-.4466	-.5170	-.4763999	.9999	-.5581
	.755	-.482999	.9999	-.4742999	.9999	.999
	.869	-.5911	-.6410	-.5514999	.9999	.9999
	.902	.999	-.6680	.999	.9999	-.5541
	.923	-.5988	-.5997	.999	.9999	-.5673
	.945	-.5682	-.6213	-.4810	.9999	.9500
	.982	-.1359	-.6213	-.5005	.9999	.3779
				-.1000	.9999	.10036
					.9999	.8267
					.9999	.5747
					.9999	.12806
					.9999	-.4980
					.9999	-.4409

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11058)

MACH (5) = 2.740 ALPHA (1) = 130.100

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1551	999.9999	.2029	.5342
.902	999.9999	999.9999	-.0255	.0904
.923	-.1502	999.9999	-.1355	.4564
.945	-.1514	999.9999	-.1423	.2708
.962	.0465	999.9999	-.0197	.7745

- .1108
- .1435

MACH (6) = 3.480 ALPHA (1) = 130.080 Q(PSF) = 5.8600 PO = 60.010 P = .81000 RW/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0283	999.9999	-.0429	-.0632	.1058	.3222
.050	-.0394	999.9999	-.0475	-.0615	.1346	.3585
.074	-.0390	999.9999	-.0531	-.0480	.1475	.3735
.098	-.0480	999.9999	-.0582	-.0565	.1503	.3617
.111	-.0542	999.9999	-.0649	-.0204	.2811	.9980
.139	-.0570	999.9999	-.0678	.0635	.2185	.8528
.168	-.0621	999.9999	-.0655	-.0554	.5499	.8909
.191	-.0655	999.9999	-.0629	-.0508	.5274	.9039
.255	-.0689	999.9999	-.0683	999.9999	.2157	.8914
.344	-.0734	999.9999	-.0424	999.9999	.5468	.10454
.392	999.9999	999.9999	999.9999	999.9999	.2190	.8938
.667	999.9999	999.9999	999.9999	999.9999	.5037	.10447
.702	-.0824	999.9999	-.0734	999.9999	.1796	.10544
.724	-.0807	999.9999	-.0475	999.9999	.1796	.10161
.744	-.0779	999.9999	-.0835	999.9999	.0483	.0195
.755	-.0790	999.9999	-.0790	999.9999	.5079	-.0362
.869	-.0830	999.9999	999.9999	999.9999	.4445	999.9999
.902	999.9999	999.9999	999.9999	999.9999	.6018	2.0098
.923	-.0711	999.9999	-.0796	999.9999	.1711	1.7342
.945	-.0666	999.9999	-.0717	999.9999	.4693	1.3188
.982	.3194	999.9999	-.0734	999.9999	.3431	1.1744
					.1820	1.1998
					.1711	1.3876
					.4693	1.1248
					.3431	.7528
					.1820	.0049
						-.0649
						1.6564

.5324 .0139 -.0576
.5730999 9999 -.0593
.5684 .0359 -.0627
.0127

DATE 07 MAR 77												TABULATED SOURCE DATA, MSFC TWT 603 (SAZ8F)												PAGE 151	
												MSFC TWT 603 (SAZ8F) SRB - ALL PROTUBERANCES												(R11059) (22 AUG 75)	
REFERENCE DATA												PARAMETRIC DATA													
SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.												RM-SCH = 2.000 PM1 = .000													
LREF = 146.0000 IN. YMRP = .0000 IN.																									
BREF = 146.0000 IN. ZMRP = .0000 IN.																									
SCALE = .0055																									
MACH (1) = .603 ALPHA (1) = 149.000 O(PSF) = 7.5600 PO = 38.030 P = 29.750 RN/L = 8.8000																									
SECTION (1) SRB												DEPENDENT VARIABLE CP													
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000																									
X/L																									
.027 -.0204 -.0155 -.0125 -.0972 -.0308																									
.050 -.0679 -.0627 -.0606 -.1500 -.0665																									
.074 -.1230 -.1410 -.1294 -.1870 -.1102																									
.098 -.2369 -.1928 -.1857 -.3477 -.2793																									
.111 -.3617 -.3548 -.2319 -.5547 -.7114 -.5550 -.8242 -.3651 -.3112																									
.139 -.2397 -.2785 -.2739 -.2565 -.1900 -.1552 -.0637 -.1421 -.2669999.9999 -.2587																									
.168 -.2507 -.2932 -.2876 -.2606999.9999 -.2435 -.1097 -.1281 -.1483 -.2146 -.3860 -.2688																									
.191 -.2645 -.3029 -.2876 -.2668999.9999 -.2382 -.0872 -.1483 -.2348 -.2501 -.5053																									
.255 -.2854 -.3401 -.3401 -.999.9999 -.2501 -.1667 -.1667 -.2495 -.2532 -.5739																									
.344 -.3150 -.3025 -.4139999.9999 -.2501 -.1667 -.2504 -.2504 -.2532 -.2504 -.5064																									
.392 999.9999 -.4040 -.999.9999 -.2501 -.1667 -.2504 -.2504 -.2532 -.2504 -.5064																									
.667 999.9999 -.3225 -.5199999.9999 -.1986 -.0649 -.3614 -.4501 -.4501 -.4501 -.6986																									
.702 -.2713 -.6786 -.5931999.9999 -.7190 -.5179 -.3134 -.3134 -.3134 -.3134 -.999.9999																									
.724 -.5304 -.0455 -.4783999.9999 -.0691 -.5863 -.6774 -.6774 -.6774 -.6774 -.3988																									
.744 .0343 -.0455 -.5618999.9999 -.1354 -.3153 -.4247 -.4247 -.4247 -.4247 -.6211																									
.755 -.1560999.9999 -.5111 -.999.9999 -.0781 -.3258 -.3258 -.3258 -.3258 -.3258																									
.869 -.3676 -.4550 -.999.9999 -.1831 -.0553 -.0553 -.0553 -.0553 -.0553 -.7623																									
.902 999.9999 -.4268 -.6924 -.3908 -.7970 -.2686 -.2686 -.2686 -.2686 -.6925																									
.923 -.3890 -.4780 -.6371 -.6371 -.7970 -.7852 -.7852 -.7852 -.7852 -.8497																									
.945 -.3590 -.6371 -.6371 -.6371 -.7970 -.7852 -.7852 -.7852 -.7852 -.8497																									
.982 -.1361 -.6430 -.6430 -.6430 -.7970 -.7852 -.7852 -.7852 -.7852 -.8497																									
MACH (2) = .899 ALPHA (1) = 149.000 O(PSF) = 7.3700 PO = 22.020 P = 13.030 RN/L = 6.3000																									
SECTION (1) SRB												DEPENDENT VARIABLE CP													
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000																									
X/L																									
.027 -.0714 -.0620 -.0570 -.0625 -.0258																									
.050 -.1326 -.1117 -.1161 -.1169 -.0818																									
.074 -.2074 -.1896 -.2027 -.2296 -.1821																									
.098 -.3150 -.2674 -.2616 -.5254 -.6915																									
.111 -.4115 -.3934 -.3437 -.4331 -.0821																									
.139 -.2869 -.2967 -.3088 -.2965 -.2366 -.1447 -.2063999.9999 -.2522 -.4174																									
.168 -.2852 -.3032 -.3004 -.2886999.9999 -.2483 -.0753 -.1768 -.2521 -.3427																									
.191 -.2891 -.3092 -.2937999.9999 -.2350 -.1763 -.1763 -.2575 -.2575 -.3188																									
.255 -.3095 -.3354 -.999.9999 -.0606 -.2564 -.2564 -.2564 -.2564 -.4595																									

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11059)

MACH (2) = .899 ALPHA (1) = 149.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.344	-.3529	-.3523	-.4136	999.9999	999.9999	-.2405	.1847	.2610	-.6019
.392				999.9999	999.9999			.2668	-.4758
.667	999.9999	-.2422		999.9999	999.9999	-.0132		.2996	-.8106
.702	-.3667	-.3251		-.3408	999.9999	-.2525	.4901	.5618	-.6046
.724	-.4154	-.4133		-.4036	999.9999	-.4602	-.4438	-.3365	999.9999
.744	-.2632	-.2947		-.2620	999.9999	.2481	.7219	.7924	-.8176
.755	-.3666	999.9999		-.2818	999.9999	.0731	.4375	.5122	-.8476
.869	-.4569			999.9999	999.9999	.0565		.3967	
.902	999.9999			999.9999	999.9999	-.0258		.0728	
.923	-.4507			-.4403	999.9999	-.4771		-.3194	-.6203
.945	-.4664			-.4398	-.5036	-.6215		-.5741	-.5680
.962	-.2074			-.4373	-.4669			.9701	
					-.4628				

MACH (3) = 1.206 ALPHA (1) = 149.000 OIPSF = 9.1700 PO = 22.020 P = 9.0100 RN/L = 6.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.2006	-.1677	-.1774	-.1770	-.2397						
.050	-.2618	-.2339	-.2602	-.3189	-.3037						
.074	-.3440	-.3207	-.3138	-.4842	-.3217						
.098	-.4433	-.4514	-.4121	-.5705	-.4112						
.111	-.4262	-.4317	-.4274	-.5369	-.1297						
.139	-.3418	-.3207	-.3150	-.2738	.0852						
.168	-.3213	-.3069	-.2951	999.9999	-.0472						
.191	-.3331	-.3035	-.2829	999.9999	-.0113						
.255	-.2853	-.3032	999.9999	999.9999	.0064						
.344	-.2329	-.2471	-.3013	999.9999	-.1265						
.392			999.9999	999.9999							
.667	999.9999	-.3338	999.9999	.0227							
.702	-.2917	-.3805	-.3861	999.9999	-.2105						
.724	-.4844	-.4650	-.4115	999.9999	-.4290						
.744	-.1859	-.4372	-.3834	999.9999	.3840						
.755	-.2901	999.9999	-.4078	999.9999	.2519						
.869	-.4511	-.5662	999.9999	999.9999	.1716						
.902	999.9999	-.5051	999.9999	999.9999	-.1454						
.923	-.4286	-.5166	-.6611	.0088	-.2051						
.945	-.4424	-.4900	-.6402	-.5150	-.2235						
.962	-.0314		-.1982		1.1554						

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11059)

MACH (4) = 1.974 ALPHA (1) = 149.000 O(PSF) = 10.890 PO = 30.000 P = 3.9900 RN/L = 7.5000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.1367	-.1352	-.1344	-.1650	-.0691						
.050	-.1594	-.1524	-.1793	-.1706	-.0507						
.074	-.1783	-.1756	-.1788	-.1622	-.0390						
.098	-.1949	-.1906	-.2714	-.1652	-.0649						
.111	-.1912	-.1931	-.1743	-.1139	.2883	.0992	-.2160	-.1888			
.139	-.1710	-.1722	-.1606	-.1646	.3426	.1322	.9999	-.1825			
.168	-.1710	-.1734	-.1888	.9999	.3307	.1281	-.1786	-.1683			
.191	-.1749	-.1790	-.1824	.9999	.3218		-.1918				
.255	-.1764	-.1916	.9999	.1487	.4008						
.344	-.1479	-.1536	-.1837	.9999	.3261						
.392	.9999	-.2122	.9999	.1886	.3953		-.2008				
.667	.9999		.9999		.3856		-.1827				
.702	-.1779	-.2367	-.2469	.9999	.4586		-.2267				
.724	-.2709	-.2629	-.2609	.9999	.4357		-.2749				
.744	-.1759	-.2182	-.2759	.9999	-.1080	.9999	.9999				
.755	-.2064	.9999	-.2161	.9999	.7986		-.1125				
.869	-.2210	-.2431	-.2161	.9999	.6086		-.1200				
.902	.9999	-.2634	.9999	.2073	.4335						
.923	-.2561	-.2673	.9999	-.0507	-.0021		-.2044				
.945	-.2673	-.3012	-.1543	.2314	.4826		-.2710				
.982	.1783		-.2705	-.1364	.0953						
			.0100		1.1531						

MACH (5) = 2.740 ALPHA (1) = 149.000 O(PSF) = 5.3700 PO = 30.000 P = 1.2100 RN/L = 5.1000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0763	-.0815	-.0870	-.0834	.0035						
.050	-.0957	-.0900	-.0949	-.0712	.0157						
.074	-.0975	-.1064	-.1143	-.0639	.0198						
.098	-.1094	-.1192	-.1326	-.0560	.0224						
.111	-.1112	-.1077	-.1247	-.0938	.3914	.1777	-.0937	-.1064			
.139	-.1034	-.0937	-.1198	-.0796	.3580	.1959	.9999	-.0992			
.168	-.1052	-.0925	-.1079	.9999	.3641	.1959	-.0852	-.0985			
.191	-.1058	-.0881	-.1119	.9999	.3573		-.0961				
.255	-.1040	-.1064	.9999	.2044	.4176						
.344	-.1016	-.0821	-.1076	.9999	.4236						
.392	.9999	-.1192	.9999	.2147	.4261		-.0967				
.667	.9999		.9999		.4261		-.0949				
.702	-.1234	-.1102	-.1240	.9999	.4971		-.0876				
.724	-.1453	-.1513	-.1175	.9999	.4782		-.1100				
.744	-.0967	-.0902	-.1392	.9999	.0121	.9999	.9999				
.755	-.1058	.9999	-.1070	.9999	.0546		-.0160				
					.6211		-.0377				

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11059)

MACH (5) = 2.740 ALPHA (1) = 149.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
1162	-.1258	-.1270	-.1283	-.1380	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271
999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.4172	.0661	.4320	.1582	1.1451																	

MACH (6) = 3.480 ALPHA (1) = 149.000 OIPSF = 6.0600 PO = 60.010 P = .81000 RV/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525	-.0525
999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.0309	.0392	.0449	.0545	.4169	.4428	.4445	.4417	.4447	.4479	.4481	.5043	.5099	.0508	.0883	.0099	.6850	.3825	.1013	.3859	.1762	.9405

(R11050)

MSFC TWI 603 (SA28F) SRB - ALL PROTEGERANCES

MACH (2) = .900 ALPHA (1) = 159.880

SECTION 115AB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-.0821	-.0899	-.1270999	999.9999	-.1061	-.0191	-.0031	-.1382
344				999.9999			-.0132	-.1594
392				999.9999			.1260	.0390
667	999.9999	.0404		999.9999	.0764		.1260	.0546
702	-.0037	-.0126	-.0526999	9999.9999	-.0692	-.0514	-.0398	999.9999
724	-.0133	.0329	-.1699999	9999.9999	-.2615	-.3032	-.3077	.0192
744	-.0927	-.0702	-.0820999	9999.9999	.1317	-.3563	.4085	-.0787
755	-.1466999	9999.9999	-.1326999	9999.9999	.0309	.2038	-.2378	
869	-.4074	-.4285		999.9999		-.3184	-.1957	
902	999.9999	-.3981		999.9999		-.4460	.4652	
923	-.3522	-.3962		999.9999		-.4851	-.4550	-.4377
945	-.3123	-.3473		999.9999		-.5063	-.6532	-.4085
982	-.3221			999.9999		-.3940	-.3517	

MACH (3) = 1.08 ALPHA (1) = 169.900 O (PCF) = 9.1400 PO = 22.010 P = 9.1000 RN/L = 6.7000

SECTION 115RB

DEPENDENT VARIABLE CP

THETA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L	027	0102	- .0099	0080	0168	0211		
	050	- .0417	- .0712	- .0718	- .0707	- .1065		
	074	- .1762	- .2068	- .2649	- .4181	- .3881		
	098	- .5565	- .5703	- .5027	- .5295	- .5160		
	111	- .1993	- .1955	- .2454	- .0963	- .0198	- .0959	- .1988
	139	- .0542	- .0411	- .0647	- .0086	0748	0637999	9999
	168	- .0313	- .0291	- .0542999	9999	0480	- .0165	- .1023
	191	- .0384	- .0318	- .0548999	9999	0383	- .0772	
	255	- .0646	- .0614	999.9999	0102	0397		
	344	- .0373	- .0400	- .0980999	9999	0359	- .0980	
	392	999.9999	0105	999.9999	0485	0690	- .0690	
	667	999.9999	- .0279	- .1894999	9999	- .0140	- .0064	
	702	- .0206	- .1819	- .3365999	9999	- .0947	- .1707	
	724	- .1445	- .0053	- .0017999	9999	- .4304	999.9999	
	744	- .0247	- .0053	- .0017999	9999	- .5465	1879	
	755	- .0696999	9999	- .0519999	9999	4416	1258	
	869	- .3364	- .3463	999.9999	- .0764	0194		
	902	999.9999	- .3521	999.9999	- .3294	- .3294		- .3931
	923	- .3240	- .3441	- .3815	- .3391	- .1581		- .3906
	945	- .3002	- .3338	- .4091	- .5500	- .5821		
	982	- .1746		- .2935		- .1176		

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES
PARAMETRIC DATA
SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055
MACH (1) = .598 ALPHA (1) = 179.900 Q(PSF) = 7.4800 PO = 38.020 P = 29.860 RN/L = 8.8000
RN-SCH = 2.000 PHI = .000

DEPENDENT VARIABLE CP									
SECTION (1) SRB									
THETA									
X/L									
.027	.1186	.1178	.1072	.1130	.1148				
.050	.0855	.0866	.0796	.0747	.0763				
.074	.0267	.0217	.0151	.0094	.0098				
.098	.1460	.1469	.1070	.1530	.1538				
.111	.4575	.4423	.3750	.4209	.4528	.4427	.3512	.4366	
.139	.0906	.0949	.0098	.0932	.1030	.1173	.9999	.0976	
.168	.0431	.0478	.0458	.0572	.0581	.0568	.0174	.0494	
.191	.0248	.0250	.0288	.0453	.0460	.0464	.0332		
.255	.0124	.0141	.9999	.0356	.0359	.0359			
.344	.0354	.0006	.0486	.0485	.0440	.0437	.0552		
.392	.9999	.0716	.9999	.9999	.0552	.0437	.0849		
.667	.9999	.9999	.9999	.0276	.0238	.0238	.0380		
.702	.0444	.0280	.0427	.0323	.0003	.0016	.0097		
.724	.2331	.2357	.1820	.1901	.1968	.1820	.9999		
.744	.3372	.2599	.1920	.1793	.2091	.2274	.1914		
.755	.2332	.9999	.1162	.1101	.1200	.1320	.1221		
.869	.0124	.0773	.9999	.0992	.0406	.0406			
.902	.9999	.2486	.9999	.2481	.2650	.2650	.3440		
.923	.3826	.3619	.3579	.3567	.3540	.3540	.3608		
.945	.5076	.4066	.3633	.4018	.5030	.5030			
.982	.8202		.7761		.8435	.8435			
MACH (2) = .904 ALPHA (1) = 179.900 Q(PSF) = 7.4100 PO = 22.010 P = 12.950 RN/L = 6.3000									

DEPENDENT VARIABLE CP									
SECTION (1) SRB									
THETA									
X/L									
.027	.1291	.1329	.1274	.1217	.1209				
.050	.0981	.0889	.0897	.0786	.0792				
.074	.0051	.0195	.0043	.0149	.0084				
.098	.2470	.2637	.1857	.2289	.2172				
.111	.3222	.3136	.3258	.3086	.3211	.3190	.3292	.3211	
.139	.0688	.0654	.0621	.0702	.0809	.0858	.0877	.9999	.0757
.168	.0263	.0250	.0216	.0313	.0402	.0439	.0441	.0199	
.191	.0128	.0091	.0081	.0168	.0300	.0372	.0138		
.255	.0095	.0039	.9999	.0226	.0307				

MSFC TWT 603 (5A28F) SRB - ALL PROTUBERANCES

(R11081)

MACH (2) = .904 ALPHA (1) = 179.900

SECTION 115RB

DEPENDENT VARIABLE CP

THETA
 .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-0.0515	-0.0357	-0.0199	0.0041	0.0179	0.0317	0.0455	0.0593	0.0731	0.0869	0.1007	0.1145	0.1283	0.1421	0.1559	0.1697	0.1835	0.1973	0.2111	0.2249	0.2387	0.2525	0.2663	0.2801	0.2939	0.3077	0.3215	0.3353	0.3491	0.3629	0.3767	0.3905	0.4043	0.4181	0.4319	0.4457	0.4595	0.4733	0.4871	0.5009	0.5147	0.5285	0.5423	0.5561	0.5699	0.5837	0.5975	0.6113	0.6251	0.6389	0.6527	0.6665	0.6803	0.6941	0.7079	0.7217	0.7355	0.7493	0.7631	0.7769	0.7907	0.8045	0.8183	0.8321	0.8459	0.8597	0.8735	0.8873	0.9011	0.9149	0.9287	0.9425	0.9563	0.9701	0.9839	0.9977	1.0115	1.0253	1.0391	1.0529	1.0667	1.0805	1.0943	1.1081	1.1219	1.1357	1.1495	1.1633	1.1771	1.1909	1.2047	1.2185	1.2323	1.2461	1.2599	1.2737	1.2875	1.3013	1.3151	1.3289	1.3427	1.3565	1.3703	1.3841	1.3979	1.4117	1.4255	1.4393	1.4531	1.4669	1.4807	1.4945	1.5083	1.5221	1.5359	1.5497	1.5635	1.5773	1.5911	1.6049	1.6187	1.6325	1.6463	1.6601	1.6739	1.6877	1.7015	1.7153	1.7291	1.7429	1.7567	1.7705	1.7843	1.7981	1.8119	1.8257	1.8395	1.8533	1.8671	1.8809	1.8947	1.9085	1.9223	1.9361	1.9499	1.9637	1.9775	1.9913	2.0051	2.0189	2.0327	2.0465	2.0603	2.0741	2.0879	2.1017	2.1155	2.1293	2.1431	2.1569	2.1707	2.1845	2.1983	2.2121	2.2259	2.2397	2.2535	2.2673	2.2811	2.2949	2.3087	2.3225	2.3363	2.3501	2.3639	2.3777	2.3915	2.4053	2.4191	2.4329	2.4467	2.4605	2.4743	2.4881	2.5019	2.5157	2.5295	2.5433	2.5571	2.5709	2.5847	2.5985	2.6123	2.6261	2.6399	2.6537	2.6675	2.6813	2.6951	2.7089	2.7227	2.7365	2.7503	2.7641	2.7779	2.7917	2.8055	2.8193	2.8331	2.8469	2.8607	2.8745	2.8883	2.9021	2.9159	2.9297	2.9435	2.9573	2.9711	2.9849	2.9987	3.0125	3.0263	3.0401	3.0539	3.0677	3.0815	3.0953	3.1091	3.1229	3.1367	3.1505	3.1643	3.1781	3.1919	3.2057	3.2195	3.2333	3.2471	3.2609	3.2747	3.2885	3.3023	3.3161	3.3299	3.3437	3.3575	3.3713	3.3851	3.3989	3.4127	3.4265	3.4403	3.4541	3.4679	3.4817	3.4955	3.5093	3.5231	3.5369	3.5507	3.5645	3.5783	3.5921	3.6059	3.6197	3.6335	3.6473	3.6611	3.6749	3.6887	3.7025	3.7163	3.7301	3.7439	3.7577	3.7715	3.7853	3.7991	3.8129	3.8267	3.8405	3.8543	3.8681	3.8819	3.8957	3.9095	3.9233	3.9371	3.9509	3.9647	3.9785	3.9923	4.0061	4.0199	4.0337	4.0475	4.0613	4.0751	4.0889	4.1027	4.1165	4.1303	4.1441	4.1579	4.1717	4.1855	4.1993	4.2131	4.2269	4.2407	4.2545	4.2683	4.2821	4.2959	4.3097	4.3235	4.3373	4.3511	4.3649	4.3787	4.3925	4.4063	4.4201	4.4339	4.4477	4.4615	4.4753	4.4891	4.5029	4.5167	4.5305	4.5443	4.5581	4.5719	4.5857	4.5995	4.6133	4.6271	4.6409</
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MACH (3) = 1.199 ALPHA (1) = 179.900 O(PSS) = 9.1500 P0 = 22.010 P = 9.1000 RN/L = 6.8000

SECTION 115RB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

x/L	.027	.0312	.0239	.0231	.0220	.0239	
	.050	-.0498	-.0677	-.0537	-.0580	-.0455	
	.074	-.2741	-.2115	-.2175	-.2013	-.1780	
	.098	-.5362	-.5487	-.4471	-.5674	-.5391	
	.111	-.1252	-.1318	-.1847	-.1973	-.2203	-.2127
	.139	-.0110	-.0143	-.0165	-.0317	-.0613	-.0780
	.168	-.0077	-.0143	-.0219	-.0351	-.0541	-.0373
	.191	-.0083	-.0176	-.0377	-.0509	-.0597	-.0909
	.255	-.0748	-.0870	-.999.9999	-.0668	-.0611	-.0239
	.344	.0135	-.0312	-.1777	-.0471	-.0758	
	.392			999.9999	-.0471	-.0471	-.1226
	.667	999.9999	.1541	999.9999	-.0170	-.0170	-.0695
	.702	-.0649	-.0151	-.0094	.1020	.0928	.1202
	.724	-.1535	-.1718	-.1741	-.0351	-.0351	.0354
	.744	.3902	.2915	.2732	-.1895	-.1758	999.9999
	.755	.2732	.9999	.2472	.2603	.3310	.1421
	.869	-.1899	-.2059	.1681	.1728	.1815	.1081
	.902	999.9999	.4161	999.9999	-.2047	-.1694	
	.923	-.4314	-.5085	999.9999	-.4062	-.4148	-.4657
	.945	-.5598	-.5971	-.4461	-.4971	-.4318	-.4827
	.982	-.2179	-.6076	-.1944	-.6088	-.5794	-.2218

-.2127	-.1239	-.1688
-.0780	.9999	-.0406
-.0373	.0909	-.0069
	-.0239	
	-.1226	
	-.0695	
	.1202	
	.0354	
	.9999	
	.1421	
	.1081	
		-.4657
		-.4827

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 803 (SA28F)

(R11062) (22 AUG 73) (EL ONY 23)

MSFC TWT 603 (SA28F) SRB - ALL PROTRUBANCES

REFERENCE DATA

SREF	=	116.3600	SQ.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

PN-SCH - 1.000 PH1 • 45.000

WACH / 11 =	FOR ALBUJA / 11 =	70 000	0 (BSF) =	3 5300	P0 =	17.990	P =	14.130	RM/L =	4.1000
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DEPENDENT VARIABLE CP

SECTION () SRB

1457A	0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
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7/1X

[illegible]

DATE 07 MAR 77

TABLED SOURCE DATA, MSFC TWT-603 (5A28F)

PAGE 164

(R11083) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

REFERENCE DATA

SREF	=	116.2600	50. FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

RN-SCH	=	2.000	PHI	=	45.000
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PARAMETRIC DATA

MACH () = .595 ALPHA () = 70.000 Q(PSF) = 7.400 P = 38.020 PAV/L = 8.7000

BMS 111 NC 1335

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 35.0000 57.5000 80.0000 102.5000 125.0000 147.5000 170.0000 192.5000 215.0000 237.5000 260.0000 282.5000 305.0000 327.5000 350.0000 372.5000 395.0000 417.5000 440.0000 462.5000 485.0000 507.5000 530.0000 552.5000 575.0000 597.5000 620.0000 642.5000 665.0000 687.5000 710.0000 732.5000 755.0000 777.5000 800.0000 822.5000 845.0000 867.5000 890.0000 912.5000 935.0000 957.5000 980.0000 1002.5000 1025.0000 1047.5000 1070.0000 1092.5000 1115.0000 1137.5000 1160.0000 1182.5000 1205.0000 1227.5000 1250.0000 1272.5000 1295.0000 1317.5000 1340.0000 1362.5000 1385.0000 1407.5000 1430.0000 1452.5000 1475.0000 1497.5000 1520.0000 1542.5000 1565.0000 1587.5000 1610.0000 1632.5000 1655.0000 1677.5000 1700.0000 1722.5000 1745.0000 1767.5000 1790.0000 1812.5000 1835.0000 1857.5000 1880.0000 1902.5000 1925.0000 1947.5000 1970.0000 1992.5000 2015.0000 2037.5000 2060.0000 2082.5000 2105.0000 2127.5000 2150.0000 2172.5000 2195.0000 2217.5000 2240.0000 2262.5000 2285.0000 2307.5000 2330.0000 2352.5000 2375.0000 2397.5000 2420.0000 2442.5000 2465.0000 2487.5000 2510.0000 2532.5000 2555.0000 2577.5000 2600.0000 2622.5000 2645.0000 2667.5000 2690.0000 2712.5000 2735.0000 2757.5000 2780.0000 2802.5000 2825.0000 2847.5000 2870.0000 2892.5000 2915.0000 2937.5000 2960.0000 2982.5000 3005.0000 3027.5000 3050.0000 3072.5000 3095.0000 3117.5000 3140.0000 3162.5000 3185.0000 3207.5000 3230.0000 3252.5000 3275.0000 3297.5000 3320.0000 3342.5000 3365.0000 3387.5000 3410.0000 3432.5000 3455.0000 3477.5000 3500.0000 3522.5000 3545.0000 3567.5000 3590.0000 3612.5000 3635.0000 3657.5000 3680.0000 3702.5000 3725.0000 3747.5000 3770.0000 3792.5000 3815.0000 3837.5000 3860.0000 3882.5000 3905.0000 3927.5000 3950.0000 3972.5000 3995.0000 4017.5000 4040.0000 4062.5000 4085.0000 4107.5000 4130.0000 4152.5000 4175.0000 4197.5000 4220.0000 4242.5000 4265.0000 4287.5000 4310.0000 4332.5000 4355.0000 4377.5000 4400.0000 4422.5000 4445.0000 4467.5000 4490.0000 4512.5000 4535.0000 4557.5000 4580.0000 4602.5000 4625.0000 4647.5000 4670.0000 4692.5000 4715.0000 4737.5000 4760.0000 4782.5000 4805.0000 4827.5000 4850.0000 4872.5000 4895.0000 4917.5000 4940.0000 4962.5000 4985.0000 5007.5000 5030.0000 5052.5000 5075.0000 5097.5000 5120.0000 5142.5000 5165.0000 5187.5000 5210.0000 5232.5000 5255.0000 5277.5000 5300.0000 5322.5000 5345.0000 5367.5000 5390.0000 5412.5000 5435.0000 5457.5000 5480.0000 5502.5000 5525.0000 5547.5000 5570.0000 5592.5000 5615.0000 5637.5000 5660.0000 5682.5000 5705.0000 5727.5000 5750.0000 5772.5000 5795.0000 5817.5000 5840.0000 5862.5000 5885.0000 5907.5000 5930.0000 5952.5000 5975.0000 5997.5000 6020.0000 6042.5000 6065.0000 6087.5000 6110.0000 6132.5000 6155.0000 6177.5000 6200.0000 6222.5000 6245.0000 6267.5000 6290.0000 6312.5000 6335.0000 6357.5000 6380.0000 6402.5000 6425.0000 6447.5000 6470.0000 6492.5000 6515.0000 6537.5000 6560.0000 6582.5000 6605.0000 6627.5000 6650.0000 6672.5000 6695.0000 6717.5000 6740.0000 6762.5000 6785.0000 6807.5000 6830.0000 6852.5000 6875.0000 6897.5000 6920.0000 6942.5000 6965.0000 6987.5000 7010.0000 7032.5000 7055.0000 7077.5000 7100.0000 7122.5000 7145.0000 7167.5000 7190.0000 7212.5000 7235.0000 7257.5000 7280.0000 7302.5000 7325.0000 7347.5000 7370.0000 7392.5000 7415.0000 7437.5000 7460.0000 7482.5000 7505.0000 7527.5000 7550.0000 7572.5000 7595.0000 7617.5000 7640.0000 7662.5000 7685.0000 7707.5000 7730.0000 7752.5000 7775.0000 7797.5000 7820.0000 7842.5000 7865.0000 7887.5000 7910.0000 7932.5000 7955.0000 7977.5000 8000.0000 8022.5000 8045.0000 8067.5000 8090.0000 8112.5000 8135.0000 8157.5000 8180.0000 8202.5000 8225.0000 8247.5000 8270.0000 8292.5000 8315.0000 8337.5000 8360.0000 8382.5000 8405.0000 8427.5000 8450.0000 8472.5000 8495.0000 8517.5000 8540.0000 8562.5000 8585.0000 8607.5000 8630.0000 8652.5000 8675.0000 8697.5000 8720.0000 8742.5000 8765.0000 8787.5000 8810.0000 8832.5000 8855.0000 8877.5000 8900.0000 8922.5000 8945.0000 8967.5000 8990.0000 9012.5000 9035.0000 9057.5000 9080.0000 9102.5000 9125.0000 9147.5000 9170.0000 9192.5000 9215.0000 92

X/L	-1.4549	-1.8458	-1.8957	-3446	1.0004
.027			-1.8957	-3446	1.0004
.050	-1.5432	-1.8661	-1.5840	-2902	1.0468
.074	-7757	-1.2088	-1.4148	-2446	1.0770
.098	-7252	-9078	-1.7003	-2100	1.0864
.111	-1.0996	-8645	-1.7181	-1.2803	.8116
.139	-7209	-7665	-1.7233	-1.3863	.7578
.168	-6735	-7586	-1.7692	-1.2942	.7337
.191	-6589	-6885	-1.6724	-1.0301	.7118
.255	-5828	-5320	-6762	999.9999	.9952
.344	-4787	-4686	-4620	-9940	.7041
.392			-6558		.9835
.667	999.9999	-5537	-6987	999.9999	.9456
.702	-5432	-5383	-8271	-9889	.6931
.724	-5264	-5070	-7150	-9634	.1.0558
.744	-5517	-5580	-6414	-8917	999.9999
.755	-5165	999.9999	-9877	-8917	.0877
.869	-4686	-4965	-1.2166	-9234	.9734
.902	999.9999	-5153	-5986	999.9999	.9616
.923	-4654	-5060	-5747	999.9999	1.0513
.945	-4599	-4868	-7247	-2656	1.0570
.982	-4181		-6069	-1913	.9844
			-9241		.4087

MACH (2) =	.900	ALPHA (1) =	70.000	Q(PSF) =	7.3800	P0	=	22.000	P	=	13.010	RN/L	=	6.3000
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SECTION 115RB

DEPENDENT VARIABLE CP

THEYA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

[illegible]

(R11083)

STABILIZED SOURCE DATA, NSFC TWT 803 (SA28F)

DATE 07 MAR 77

MSFC THY 603 (SA28F) SRB - ALL PROTRUDANCES

MACH (2) = .900 ALPHA (1) = 70.000

DEPENDENT VARIABLE CP

SECTION 115RB

00000 22 5000 45 0000 67 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

X/L	- .4962	- .4919	- .4994	- .5781	- .7045	.9024	1.1129	- .4983
.344				- .4726			1.1091	- .4773
.362				- .4935	999.9999		1.0753	- .7400
.667		- .4374		- .5002	- .7001	.8694	1.0867	- .4535
.702	- .4307	- .4315		- .5321	- .6087	.9634	1.1927	999.9999
.724	- .4262	- .4190	- .4064	- .5646	- .6283	.9831	1.2733	- .5435
.744	- .4131	- .4146	- .4576	- .5011	- .6506	.8922	1.0716	- .4840
.755	- .4171	999.9999	- .4329	- .4340			1.0738	
.869	- .3941		- .4041	- .4594	999.9999		1.1818	
.902	999.9999		- .4058	- .6505	999.9999		1.1818	- .4995
.923	- .3503		- .3604	- .7129	.0768		1.0971	- .5409
.945	- .3569		- .3591	- .7532	.0978		.2686	
.985	- .3265							

[illegible]

DEPENDENT VARIABLE CP

SECTION 115RB

0000 23 6000 45 0000 67 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

X/L	027	- .7212	- .7111	- .5938	.5848	1.3266			
	050	- .7102	- .7164	- .5636	.6009	1.3651			
	074	- .6380	- .6783	- .5607	.6139	1.3874			
	098	- .6052	- .6097	- .5531	.6231	1.4048			
	111	- .5958	- .5739	- .5856	.6362	1.3938			
	139	- .5307	- .5234	- .5698	.6254	1.3593			
	168	- .4889	- .4913	- .5086	.6299	1.3377			
	191	- .4751	- .4757	- .4913	.6299	1.3293			
	255	- .4418	- .4447	- .5159	.6299	1.3083			
	344	- .3688	- .3743	- .5573	.6299	1.2895			
	392	999.9999	- .4788	- .5091	.6299	1.2882			
	667	- .4775	- .4690	- .5926	.6299	1.2585			
	702	- .4527	- .4234	- .5717	.6299	1.2686			
	724	- .4731	- .4767	- .5843	.6299	1.3634			
	744	- .4584	- .4599.9999	- .5606	.6299	1.3951			
	755	- .4350	- .4872	- .5249	.6299	1.2800			
	869	999.9999	- .4140	- .5506	.6299	1.3550			
	902	- .4179	- .3958	- .4073	.6299	1.3633			
	923	- .4153	- .4084	- .4241	.6299	1.2785			
	945	- .3619	- .4659	- .4559	.6299	1.6609			
	982				.6299				

TABULATED SOURCE DATA, HSFC TWT 803 (SA28F)

(R) 10631.

MSFC TH1 603 (5A28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 70.000

SECTION (11588)
DEPENDENT VARIABLE CP

0000	23	5000	45	0000	67	5000	90	0000	112	5000	135	0000	157	5000	180	0000	225	0000	270	0000	315	0000
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[illegible]

0127
0232

[illegible]

SECTION : 15RB DEPENDENT VARIABLE CP

00000 22 5000 45 0000 67 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

7/8

027	- 0310	- 0446	0873	1 0489	1 7960		
050	- 0395	- 0468	0964	1 0265	1 8076		
074	- 0315	- 0513	0919	1 0068	1 8099		
098	- 0367	- 0547	0660	1 0406	1 7986		
111	- 0547	- 0558	0220	1 738	1 7024	9080	0603 - 0502
139	- 0440	- 0457	0806	0230	1 6017	8670	0445999 9999
168	- 0479	- 0423	0406	2166999 9999	1 4905	8499	0377 - 0491
191	- 0383	- 0383	0231	2669	1 6293		0373
255	- 0502	- 0536	0349	999 9999	1 6155		
344	- 0344	- 0434	0434	2614	1 6022		0473
392		- 0598	0541	999 9999	1 5943		0490
667	999 9999	- 0417	0513	3352	1 5915		0626
702	- 0581	- 0344	1263	3476	1 6424		0773
724	- 0569	- 0604	- 0089	1946	1 9741	999 9999	
744	- 0688	- 0671	- 0666	2795	9452	- 0169	
755	- 0700999 9999	- 0733	0186	999 9999	1 8234	0338	
869	- 0637	- 0637	0637	999 9999	1 6571		
902	999 9999	- 0637	1422	999 9999	1 9820		0423
923	- 0654	- 0547	0540	8363	2 0311		0818
943	- 0632	- 0609	1122	9069	1 7299		
982	- 0490	- 0632	- 0654		5412		

NSFC TWT 603 (5A28F) SR0 - ALL PROTRUSANCES (R11069)

MACH (2) = .903 ALPHA (1) = 90.000

SECTION 115A09

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	- .5214	- .5242	- .5126	- .5039	- .6200	- .6799	1.0202	1.2351	- .5241
.344					- .7063			1.2384	- .6341
.392					- .6017	999.9999		1.2394	- .5167
.667	999.9999		- .5126	- .4911	- .6031	- .6537	1.0137	1.2328	- .4832
.702	- .4788	- .5065		- .4917	- .6281	- .6983	999.9999	1.2355	999.9999
.724	- .4942	- .4876		- .5335	- .7064	- .5910	1.0061	1.2354	- .6942
.744	- .5133	- .5301		- .5734	- .6598	- .6892	1.0134	1.2344	- .6435
.755	- .5139999.9999				- .5821	999.9999		1.2395	
.869	- .5552	- .5319			- .6625	999.9999		1.2359	
.902	999.9999	- .5443			- .6625	999.9999		1.2355	- .9455
.923	- .5626	- .5696			- .7421	.0887		1.2324	- .8756
.945	- .5714	- .5916			- .7868	.2056		1.1763	
.982	- .5350				- .7931				

MACH (3) = 1.198 ALPHA (1) = 90.000 O(PSF) = 9.1400 PO = 22.000 P = 9.0900 RM/L = 6.7000

BBS (1) ; NO 1.135

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	-5209	-5223	-5279	3112	1.0295	
	0.50	-5302	-5264	-5326	3490	1.0995	
	0.74	-5253	-5222	-5124	3725	1.1509	
	0.98	-5236	-5227	-5528	3589	1.2171	
	1.11	-5179	-5249	-5372	-4859	1.2669	5673
	1.39	-5034	-5069	-5277	-5302	1.1990	5911
	1.68	-4910	-4952	-5063	-5907	1.2160	5946
	1.91	-4872	-4905	-4947	-5767	1.2169	5958
	2.25	-4704	-4711	-5577	999.9999	1.4021	5600
	3.44	-4265	-4464	-5550	-1511	1.4038	
	3.92	999.9999	-4329	-5706	999.9999	1.2275	4248
	6.67	-4533	-4608	-5588	999.9999	1.3987	4504
	7.02	-4544	-4655	-5468	-1334	1.4032	4230
	7.24	-4621	-4712	-5998	-1980	1.4042	4608
	7.55	-4586999.9999	-4822	-5836	-0507	1.2149	999.9999
	8.69	-5005	-5139	-6115	-1628	1.2253	9281
	9.02	999.9999	-5211	-5903	999.9999	1.4009	5535
	9.23	-5187	-5370	-5830	999.9999	1.4039	
	9.45	-5186	-5305	-5421	4579	1.4047	6977
	9.82	-4766		-4576	5471	1.3976	6934
				-5457		1.3463	

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)									
MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11085)									
MACH (4) =	1.957	ALPHA (1) =	90.000	Q(PSF) =	10.990	PO =	30.010	P =	4.1000 RN/L = 7.4000
SECTION (1)SRB									
DEPENDENT VARIABLE CP									
THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000
X/L	.027	.2438	.2459	.2476	.2499	.2518	.2532	.2547	.2564
.050	.2481	.2476	.2459	.2438	.2411	.2389	.2369	.2349	.2329
.074	.2463	.2459	.2438	.2411	.2389	.2369	.2349	.2329	.2309
.098	.2481	.2476	.2459	.2438	.2411	.2389	.2369	.2349	.2329
.111	.2466	.2459	.2438	.2411	.2389	.2369	.2349	.2329	.2309
.139	.2448	.2438	.2411	.2389	.2369	.2349	.2329	.2309	.2289
.168	.2439	.2426	.2411	.2389	.2369	.2349	.2329	.2309	.2289
.191	.2424	.2411	.2389	.2369	.2349	.2329	.2309	.2289	.2269
.255	.2319	.2309	.2289	.2269	.2249	.2229	.2209	.2189	.2169
.344	.2420	.2411	.2389	.2369	.2349	.2329	.2309	.2289	.2269
.392	.2422	.2411	.2389	.2369	.2349	.2329	.2309	.2289	.2269
.657	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.702	.2377	.2369	.2349	.2329	.2309	.2289	.2269	.2249	.2229
.724	.2409	.2409	.2389	.2369	.2349	.2329	.2309	.2289	.2269
.744	.2480	.2480	.2463	.2448	.2438	.2426	.2411	.2399	.2389
.755	.2463	.2463	.2448	.2438	.2411	.2389	.2369	.2349	.2329
.869	.2397	.2397	.2377	.2369	.2349	.2329	.2309	.2289	.2269
.902	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.923	.2502	.2502	.2480	.2463	.2448	.2438	.2426	.2411	.2399
.945	.2559	.2559	.2537	.2520	.2500	.2480	.2463	.2448	.2438
.982	.1490	.1490	.1474	.1459	.1441	.1422	.1404	.1384	.1364
MACH (5) = 2.740 ALPHA (1) = 90.000 Q(PSF) = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.2000									
SECTION (1)SRB									
DEPENDENT VARIABLE CP									
THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000
X/L	.027	.0765	.0915	.1052	.1184	.1314	.1441	.1562	.1675
.050	.0880	.0880	.0851	.0820	.0784	.0744	.0700	.0652	.0600
.074	.0777	.0777	.0751	.0720	.0684	.0644	.0600	.0552	.0500
.098	.0874	.0874	.0844	.0812	.0776	.0736	.0692	.0644	.0592
.111	.0921	.0921	.0891	.0858	.0820	.0776	.0736	.0692	.0644
.139	.0951	.0951	.0921	.0888	.0844	.0796	.0752	.0704	.0652
.168	.0985	.0985	.0955	.0921	.0880	.0836	.0792	.0744	.0692
.191	.0980	.0980	.0950	.0916	.0872	.0824	.0780	.0732	.0680
.255	.0992	.0992	.0962	.0928	.0884	.0836	.0792	.0744	.0692
.344	.1029	.1029	.1000	.0966	.0920	.0872	.0824	.0776	.0724
.392	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.667	.1114	.1114	.1086	.1052	.1012	.0968	.0920	.0872	.0824
.702	.1108	.1108	.1080	.1046	.1000	.0952	.0904	.0856	.0804
.724	.1144	.1144	.1116	.1080	.1036	.0988	.0940	.0892	.0844
.744	.1144	.1144	.1116	.1080	.1036	.0988	.0940	.0892	.0844
.755	.1144	.1144	.1116	.1080	.1036	.0988	.0940	.0892	.0844

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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(R11085)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 90.000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.869	-.1114	-.1138	.0113	999.9999	1.7587						
.902	999.9999	-.1174	.0056	999.9999	1.7643						
.923	-.1186	-.1211	-.0149	.8943	-.0112						
.945	-.1186	-.1205	-.0797	.9158	-.0404						
.982	-.0058		-.0282		1.7558						

MACH (6) = 3.480 ALPHA (1) = 90.000 Q1PSF1 = 6.8700 PO = 60.040 P = .81000 RN/L = 7.1000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.027	-.0272	-.0379	.0250	.7835	1.4979						
.050	-.0345	-.0408	.0318	.8081	1.5408						
.074	-.0300	-.0447	.0195	.8007	1.5740						
.098	-.0334	-.0458	.0330	.7446	1.6196						
.111	-.0379	-.0453	.0300	.3464	.8935	.0589	-.0470				
.139	-.0403	-.0442	.0229	.1318	.8330	.9447	.0483999.9999				
.168	-.0425	-.0408	.0470	.3094999.9999	1.6418	.9559	.0544	-.0486			
.191	-.0441	-.0363	.0570	.3245	1.6420	.7971	.0595				
.255	-.0458	-.0520	.0813	999.9999	1.7971						
.344	-.0492	-.0390	.0667	.3013	1.6536	1.8058	.0714				
.392	999.9999		.0633		1.8091		.0731				
.667	999.9999	-.0599	.0623	999.9999	1.8055		.0820				
.702	-.0593	-.0486	.0928	.3315	1.6491	1.8089	.0781				
.724	-.0593	-.0605	.0347	.3282	1.6326	1.8063	999.9999				
.744	-.0638	-.0633	.0380	.4423	1.6421	1.8055	.0611				
.755	-.0638999.9999		.0584	.3175	1.6185	1.8050	.0775				
.869	-.0616	-.0644	.0595	999.9999	1.7928						
.902	999.9999	-.0644	.0533	999.9999	1.8024		.0398				
.923	-.0627	-.0638	.0374	.9218	1.7935		.0183				
.945	-.0644	-.0632	.1158	.9256	1.8009						
.982	.0313		.0173		1.7452						

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TABLED SOURCE DATA, MSFC TWT 603 (SA2BF)

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MSFC TWT 603 (5A28F) SRB - ALL PROTRUDANCES

(R11067) (22 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF	=	116.2600	SO.FT.	XMRP	=	104.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

REN-SCH - 2.000 PH1 - 45.000

MACH () =	.595	ALPHA () =	110.000	Q(PSF) =	7.4000	PO	=	37.970	P	=	29.880	RM/L	=	0.7000
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SECTION 11.035

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 190.0000 225.0000 270.0000 315.0000

0.27	- 5344	- 5504	- 7964	- 8427	- 2469
0.50	- 5147	- 4944	- 9759	- 8342	- 3019
0.74	- 5015	- 5115	- 7401	- 7500	- 3595
0.98	- 4596	- 4534	- 7941	- 7790	- 4151
1.11	- 4463	- 4628	- 4954	- 7637	- 4392
1.39	- 4500	- 5019	- 4662	- 7568	- 8331
1.68	- 5237	- 5227	- 5176	- 6363	- 9139999.99999
1.91	- 5342	- 5356	- 5799	- 7226	- 8909
2.55	- 5763	- 5718	- 8613	- 1.1067	- 9061
3.44	- 5812	- 5843	- 9917	- 1.2594	- 5332
3.92	999.9999	- 7905	- 8740	999.9999	- 9459
6.67	- 5849	- 5818	- 1.3026	- 8792	- 1.6274
7.02	- 6164	- 6116	- 6546	- 7981	- 9790
7.24	- 6169	- 5823	- 5915	- 1.2015	- 1.2349
7.55	- 6424999.9999	- 6051	- 7063	- 9315	999.9999
8.69	- 6670	- 6741	- 6451	- 8280	- 8258
9.02	999.9999	- 7232	- 8885	999.9999	- 8511
9.23	- 7890	- 7718	- 1.0850	999.9999	- 1.0013
9.45	- 7924	- 9270	- 1.2475	- 4071	- 1.0061
9.82	- 5823	- 5823	- 6903	- 1401	- 1.0833
			- 1.3078	- 9717	- 9704
				- 1.0686	- 8158
					- 7901

MACH (2) = .907 ALPHA (1) = 110.000 Q(P57) = 7.4300 PO = 22.010 P = 12.920 RN/L = 6.3000

SECTION 1150B

DEPENDENT VARIABLE CP

1HETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	3126	3683	4497	5011	5275	5845	6371	6957	7586	8261	8982	9751	10571
0.27	-3845	-3872	-4226	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261
0.50	-3879	-3798	-4208	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261
0.74	-3631	-3579	-4208	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261
0.98	-3495	-3505	-4208	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261
1.11	-3462	-3532	-4208	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261
1.39	-3537	-3643	-4208	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261
1.68	-3710	-3772	-4208	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261
1.91	-3814	-3919	-4208	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261
2.55	-4033	-4110	-4208	-4208	-4157	-4616	-5011	-5275	-5845	-6371	-6957	-7586	-8261

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TABULATED SOURCE DATA. NSFC TWT 603 (5A28F)

(R: 1067)

MACH (2) = .907 ALPHA (1) = 110.000

MSFC TWT 603 (5A28F) SRB - ALL PROTEGERANCE'S

SECTION 11598

DEPENDENT VARIABLE CP

14-ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	344	- .4161	- .4248	- .4308	- .5080	- .7178	1.0616	- .4330
	392			- .5270	- .6016		1.0584	- .4878
	667	999.9999	- .8242		- .6232	999.9999	1.1136	- .5276
	702	- .5484	- .5492	- .5518	- .7484	- .6178	1.1273	- .5531
	724	- .5579	- .5538	- .5579	- .7449	- .9372	1.1072	999.9999
	744	- .5706	- .5962	- .6178	- .7449	- .6412	1.1708	- .6210
	755	- .5895999.9999		- .6022	- .7809	- .7666	1.1408	- .5983
	869	- .6850	- .6986	- 1.1006		999.9999	1.1543	
	902	999.9999	- .7132	- .9798		999.9999	1.2245	- .9749
	923	- .7276	- .7281	- .7998		1.565	1.1378	- .9793
	945	- .7463	- .7399	- .6842		.2864	1.1429	
	982	- .5545		- 1.0495			1.1277	

MACH (3) = 1.99 ALPHA (1) = 110.000 O(PSF) = 9.1500 PO = 22.010 P = 9.0900 RN/L = 6.7000

SECTION : 115RB

DEPENDENT VARIABLE CP

14161A .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.000225.0000270.0000315.0000

X/L	027	-4061	-4025	-3869	-0471	5819	
	050	-4284	-3950	-3659	-0012	6545	
	074	-4220	-4356	-4128	0173	7096	
	098	-3760	-3941	-5145	-1209	7523	
	111	-5708	-3908	-3962	-3148	7792	1785
	139	-3912	-4121	-5422	-0168	11299	4167
	168	-4170	-4278	-5911	-3144	11790	4515
	191	-4301	-4358	-5883	-2387	11963	4161
	255	-4345	-4319	-5919	999 9999	12220	
	344	-4414	-4421	-5689	-2032	12375	-4138
	362	999 9999	-4177	-5684		12426	-5643
	667	-4359	-4329	-5731	999 9999	12827	-4144
	702	-4406	-4469	-5811	-1138	12910	-4443
	724	-4433	-4312	-5654	-3881	12752	999 9999
	744	-4477	999 9999	-6003	-1526	13397	-5307
	755	-5237	-5335	-5657	-2611	13079	-5480
	869	999 9999	-5323	-5358	999 9999	13174	
	902	-5364	-5489	-6412	999 9999	13871	-6847
	923	-5401	-5711	-5706	5096	13070	-7350
	945	-2600	-5240	-5232	6025	13101	
	982			-5230		13640	

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11067)

MACH (4) = 1.999 ALPHA (1) = 110.000 Q(PSF) = 10.980 PO = 30.000 P = 4.0900 RM/L = 7.5000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.2457	-.2377	-.2672	-.2538	.7705
.050	-.2315	-.2491	-.2596	.2775	.8190
.074	-.2506	-.2496	-.2584	.2644	.8498
.098	-.2494	-.2416	-.1693	.1014	.9334
.111	-.2324	-.2451	-.2022	.1437	.9299
.139	-.2438	-.2382	-.2503	.1143	.9299
.168	-.2379	-.2474	-.2438	.3443	1.2481
.191	-.2448	-.2479	-.2418	.1182	1.2710
.255	-.2525	-.2409	-.2533	.1555	1.4256
.344	-.2677	-.2683	-.1221	.999.9999	1.4469
.392	999.9999	-.2405	-.1018	.1459	1.3066
.667	999.9999	-.2422	-.1392	.999.9999	1.4541
.702	-.2380	-.2422	-.1515	.2073	1.4675
.724	-.2459	-.2435	-.1823	.0639	1.4765
.744	-.2384	-.2407	-.1267	.1516	1.5042
.755	-.2322	999.9999	-.1121	.1354	1.0193
.869	-.2616	-.2499	-.1138	.999.9999	1.5859
.902	999.9999	-.2702	-.2009	.999.9999	1.5221
.923	-.2668	-.2624	-.1562	.1401	1.5021
.945	-.2602	-.2686	-.0083	.1450	1.501
.982	.0419		-.0830	.7714	1.50
					1.4325
					1.6288

SECTION (5) SRB

DEPENDENT VARIABLE CP

MACH (5) = 2.740 ALPHA (1) = 110.000 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RM/L = 9.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0786	-.0925	-.0943	.3721	.8530
.050	-.0892	-.0944	-.0955	.3866	.8894
.074	-.0810	-.0992	-.0995	.3594	.9307
.098	-.0882	-.1010	-.0621	.1115	.8925
.111	-.0949	-.1058	-.0416	.0087	1.2034
.139	-.0968	-.1010	-.0226	.2775	1.3843
.168	-.1010	-.0980	-.1071	.5348	1.5192
.191	-.1035	-.0949	-.1083	.2751	1.5192
.255	-.1052	-.0949	-.1053	.2800	1.3922
.344	-.1101	-.0955	-.1034	.2050	1.5326
.392	999.9999	-.1137	-.0081	.999.9999	1.5348
.667	999.9999	-.1119	.0155	.2471	1.5405
.702	-.1120	-.0992	.0010	.999.9999	1.5414
.724	-.1125	-.1046	-.0222	.2997	1.5957
.744	-.1113	-.1098	-.0366	.1698	1.6261
.755	-.1108	-.1089	-.0123	.2506	1.0261
			-.0105	.2086	1.6054
					1.4900
					1.6364

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11068) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 45.000

MACH (1) = .602 ALPHA (1) = 130.100 Q(PSF) = 7.5400 PO = 38.000 P = 29.750 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	-.1345	-.1425	-.1453	-.4551	.0408
.050	-.1652	-.1699	-.1559	-.4782	.0540
.074	-.1888	-.2031	-.3239	-.4973	.0534
.098	-.2273	-.2333	-.2257	-.6700	.0023
.111	-.2543	-.2579	-.2827	-.3700	-.1159
.139	-.2660	-.2797	-.2717	-.7111	-.7735
.168	-.3013	-.3098	-.3118	-.7219	-.9999
.191	-.3222	-.3282	-.3326	-.4712	-.5649
.255	-.3786	-.3771	-.6567	-.9999	-.5906
.344	-.4357	-.4236	-.7551	-.7298	.6130
.392	.9999	.9999	-.6406	-.4178	.6168
.667	.9999	-.3578	-.8417	.9999	.6181
.702	-.4670	-.5082	-.5532	-.2167	-.8204
.724	-.5869	-.5559	-.5764	-.8586	-.6607
.744	-.3930	-.4659	-.5133	-.7375	-.11367
.755	-.4873	.9999	-.5720	-.8353	.9999
.869	-.5222	-.4046	-.1368	-.9193	-.7528
.902	.9999	-.4838	-.7832	.9999	-.6670
.923	-.5574	-.7094	-.8012	.9999	.6597
.945	-.5435	-.7174	-.6086	-.1907	.3209
.982	-.3421		-.6142	-.1677	.6866
					.5033
					.5494

MACH (2) = .908

ALPHA (1) = 130.100

Q(PSF) = 7.4500

PO = 22.010

P = 12.900

RN/L = 8.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	-.2687	-.2685	-.2778	-.4995	-.1148
.050	-.2774	-.2927	-.3112	-.4507	-.0526
.074	-.3010	-.3346	-.3484	-.3574	-.0117
.098	-.3254	-.3673	-.3907	-.3693	.0250
.111	-.3425	-.3626	-.4249	-.4099	-.5042
.139	-.3492	-.3696	-.3606	-.3910	.1272
.168	-.3749	-.3937	-.3884	-.4152	.4266
.191	-.3915	-.4111	-.3997	-.5652	.5667
.255	-.4356	-.4560	-.4233	-.6376	.4588
			.9999	.9999	.6235
					.6370
					.4649
					.6630

MSFC TWT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11068).

MACH (4) =	1.953	ALPHA (1) =	130.100	O(P57) =	11.010	P0	=	30.000	P	=	4.1200	MM/L	=	7.5000
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SECTION 115RB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

11

027	-2234	-2290	-2317	-0729	.2235
050	-2281	-2320	-2350	-0645	.2692
074	-2292	-2352	-2460	-1091	.3065
098	-2383	-2456	-2503	-2289	.2574
111	-2452	-2479	-2018	.0583	.8204
139	-2496	-2545	-1961	-0186	.8828
168	-2580	-2601	-1777	-0017999	.8448
191	-2632	-2628	-1766	.0558	.8527
255	-2739	-2795	-1688	99C.9999	.9625
344	-2729	-2679	-1722	.0509	.9722
392			-1717		.9735
667	999.9999	-2451	-1833	999.9999	.9975
702	-2489	-2546	-2368	.0126	.9614
724	-2615	-2605	-2513	-1824	.1864
744	-2727	-2361	-1684	.1288	1.4961
755	-2303999.9999	-2551	-1235	.0874	1.3098
869	-2500	-2549	-1650	999.9999	1.1598
902	999.9999	-2627	-2647	999.9999	.6015
923	-2655	-2794	-1084	.5450	1.0720
945	-2619	-2830	-2462	.3282	.7094
982	.1617		.1390		1.5270

MACH (5) =	2.740	ALPHA (1) =	130.100	O(PSF) =	6.3700	P0	=	30.020	P	=	1.2100	RM/L	=	5.2000
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SECTION 11 NO. 1335

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

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.027	-.0810	-.0925	-.1150	.0416	.2905
.050	-.0926	-.1039	-.1174	.0429	.3295
.074	-.0847	-.1107	-.1102	.0082	.3809
.098	-.0944	-.1144	-.1149	-.0689	.3708
.111	-.1022	-.1228	-.0469	.1485	.9644
.139	-.1052	-.1131	-.0307	.0635	.9113
.168	-.1113	-.1084	-.1143	.1385	1.0069
.191	-.1138	-.1259	-.0390	.1049	.9134
.255	-.1164	-.1010	-.1094	.1397	1.0135
.341	-.1241	-.1004	-.0317	.999	.0035
.392	.999	-.1247	-.0392	.1246	.0091
.667	.1277	-.1059	-.0513	.999	.0212
.702	-.1301	.1307	-.0889	.0960	1.0178
.724	-.1149	.1126	-.1126	.0593	.0091
.744	-.1199	-.1126	-.1107	.1267	.2147
.755	-.1149	.9999	-.0955	.0756	1.8771
			-.0945	.0362	.9983
					1.3443
					1.4573

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MSFC TWT 603 (5A23F) SRB - ALL PROTRUDANCES

MACH (5) = 2.740 ALPHA (1) = 130.100

SECTION (1) 588
DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

- .869	- .1296	- .1319	- .0469	999.9999	1.2829
.902	999.9999	- .1307	- .1126	999.9999	.5900
.923	- .1301	- .1301	- .0307	.9281	1.0409
.945	- .1271	- .1368	- .1095	.3339	.7086
.982	.2882		.1862		1.6140

-.0873
-.0985

MACH (6) = 3.480 ALPHA (1) = 130.100 Q(PSF) = 5.8600 PO = 60.010 P = .01000 RN/L = 7.1000

SECTION (115RB)
DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

71X

[illegible]

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11069) (22 AUG 75)

REFERENCE DATA

GREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 UREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RM-SCH = 2.000 PHI = 45.000

MACH (1) = .602 ALPHA (1) = 149.000 Q(PSF) = 7.5500 PO = 38.020 P = 29.760 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.027	.0083	.0096	.0139	-.0800	-.0128
.050	-.0400	-.0322	-.0576	-.1622	-.0543
.074	-.0896	-.0875	-.0991	-.2515	-.1243
.098	-.2036	-.1569	-.1937	-.5206	-.2956
.111	-.3520	-.3191	-.2552	-.7075	-.6462
.139	-.2055	-.2323	-.2241	-.4328	-.1331
.168	-.2105	-.2384	-.2299	-.3911	-.2188
.191	-.2138	-.2425	-.2252	-.3777	-.2347
.255	-.2317	-.2489	-.4940	999.9999	-.2506
.344	-.2709	-.2744	-.2969	-.4064	-.2498
.392			-.4667	.1433	-.2456
.607	999.9999	-.1987	-.6037	999.9999	-.2967
.702	-.3035	-.3724	-.3933	-.4330	-.4311
.724	-.4847	-.4344	-.4771	-.6520	-.5496
.744	-.0826	-.1780	-.2437	-.2762	-.6752
.755	-.1911	999.9999	-.3835	-.5917	-.4171
.869	-.3769	-.5732	-.8794	999.9999	-.3184
.902	999.9999	-.4332	-.6392	999.9999	-.0546
.923	-.3855	-.4490	-.6548	-.3704	-.1788
.945	-.3517	-.5452	-.5776	-.7958	-.7694
.982	.1245		-.6491		.7746

MACH (2) = .899 ALPHA (1) = 149.000 Q(PSF) = 7.3700 PO = 22.020 P = 13.030 RN/L = 6.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.027	-.0312	-.0261	-.0364	-.0431	-.0061
.050	-.1205	-.1223	-.1362	-.1706	-.0937
.074	-.2038	-.2136	-.2136	-.3781	-.2147
.098	-.3161	-.3021	-.4852	-.5023	-.7657
.111	-.4352	-.4418	-.4105	-.5251	-.0799
.139	-.2686	-.3047	-.3049	-.3777	-.2426
.168	-.2612	-.2876	-.2816	-.4210	-.2315
.191	-.2587	-.2855	-.2727	-.3494	-.2108
.245	-.2709	-.2903	-.5149	999.9999	-.4139
					-.2678
					-.4120
					-.2640

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTOBERANCES (R11070) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 MREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 45.000

MACH (1) = .603 ALPHA (1) = 169.900 Q(PSF) = 7.5600 PO = 37.990 P = 29.710 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.1090	.1068	.1141	.1122	.1238
.050	.0735	.0798	.0826	.0472	.0557
.074	.0114	.0210	.0305	.0560	.0506
.098	.1161	.1165	.1188	.3342	.3190
.111	.3219	.3356	.3970	.6352	.7232
.133	.0456	.1005	.1212	.1626	.1003
.168	.0722	.0713	.0801	.105599 9999	.0886
.191	.0625	.0626	.0647	.0827	.0166
.255	.0562	.0462	.0949	.0999 9999	.0250
.344	.0580	.0571	.0893	.999 9999	.0155
.392	.999 9999	.0407	.1132	.0900	.0097
.702	.0544	.0167	.1220	.0039	.1249
.724	.0824	.1482	.0195	.999 9999	.1341
.744	.0747	.0890	.0334	.0264	.0248
.755	.050999 9999	.9999	.2093	.3627	.0556
.869	.3341	.3952	.1913	.4013	.999 9999
.902	.999 9999	.4275	.0691	.2177	.2352
.923	.4316	.4625	.0847	.2422	.0860
.945	.3918	.4344	.3470	.0658	
.982	.4595	.4595	.4912	.2540	
			.4390	.4809	
			.5013	.7245	
			.4973	.5614	

MACH (2) = .904 ALPHA (1) = 169.900 Q(PSF) = 7.4200 PO = 22.010 P = 12.950 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0875	.0845	.2051	.0780	.0713
.050	.0400	.0444	.0181	.0105	.0624
.074	.0303	.0471	.1860	.1952	.3073
.098	.1837	.2504	.3790	.4346	.3635
.111	.3401	.3536	.3769	.3957	.2571
.139	.1172	.1206	.1230	.1038	.3111
.168	.0794	.0809	.0767	.071899 9999	.0081
.191	.0664	.0664	.0627	.0597	.0185
.255	.0666	.0615	.0829	.999 9999	.0533
			.0882	.0049	.0205
				.0140	.0923

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11070)

MACH (2) = .904 ALPHA (1) = 169.900

SECTION (1) SRB DEPENDENT VARIABLE CP

11:ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.344	-.0864	-.0920	-.1251	-.1352	-.1065	-.0233	-.0138	-.1500			
.392				-.1400			-.0169	-.1695			
.667	999.9999		.0518	.0390	999.9999		.1225	.0363			
.702	-.0057	-.0081	-.0287	-.0307	-.0375	-.0014	.0107	-.0512			
.724	-.0108	-.0267	-.1233	-.1758	-.2148	-.2683	-.2771	999.9999			
.744	-.0725	-.1202	-.0348	-.0228	.0974	-.2937	.3051	.0296			
.755	-.1250	999.9999	-.1162	-.0678	.0127	.1575	.1750	-.0705			
.869	-.4123		-.4366	-.4336	999.9999		-.2190				
.902	999.9999		-.4067	-.4393	999.9999		-.4129	-.4188			
.923	-.4613		-.3921	-.4428	-.4953		-.5019	-.3790			
.945	-.3187		-.3428	-.4358	-.5646		-.6279				
.982	-.3254			-.3763			-.4241				

MACH (3) = 1.197 ALPHA (1) = 169.900 O(PSF) = 9.1400 PO = 22.010 P = 9.1100 RN/L = 6.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

11:ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.027	.0348	.0228	.0228	.0061	.0299	.0381	.0381				
.050	-.0250	-.0423	-.0423	-.0832	-.1226	-.2054	-.2054				
.074	-.1457	-.1729	-.1729	-.2783	-.4508	-.4746	-.4746				
.098	-.5437	-.5095	-.5095	-.5842	-.4986	-.5119	-.5119				
.111	-.2080	-.2009	-.1826	-.1642	-.1756	-.0433	-.0162	-.0953	-.1926	-.2270	
.139	.0610	-.0502	-.0439	-.0590	-.0204	.0379	.0621	.0056	-.0316	999.9999	
.168	-.0289	-.0297	-.0274	-.0428	-.0176	.0442	.0280	-.0427	-.0451	.0291	
.191	-.0307	-.0307	-.0374	-.0626	-.0415	.0233	.0382	-.0752			
.255	-.0611	-.0564	-.0564	-.0850	999.9999	.0409	.0409				
.344	-.0296	-.0425	-.1019	-.1013	-.0707	.0182	.0299	-.1089			
.392				-.0409		.0583	.0583	-.0514			
.667	999.9999	.0310		.0105	999.9999	-.0023	-.0023	-.0515			
.702	-.0138	-.1188	-.1389	-.1538	-.1681	-.1363	-.1192	-.1711			
.724	-.1897	-.2057	-.2725	-.3061	-.3684	-.4228	-.4287	999.9999			
.744	-.0072	-.0523	.1897	.2633	.2280	.4983	.5524	.2219			
.755	-.0651	999.9999	.0935	.1119	.1348	.3443	.3886	.1214			
.869	-.3373		-.3514	-.2514	999.9999	.0268	.0268				
.902	909.9999		-.3511	-.3718	999.9999	-.3093	-.3093	-.3901			
.923	-.3241		-.3442	-.3041	-.2134	-.2945	-.2945	-.4076			
.945	-.3095		-.3369	-.4512	-.6617	-.6294	-.6294				
.982	-.1689			-.2638		-.1664	-.1664				

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

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TABULATED SOURCE DATA, MSFC TNT 603 (SA28F)

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MSFC TNT 603 (SA28F) SRB - ALL PROTUBERANCES (R11070)

MACH (4) = 1.968 ALPHA (1) = 169.900 Q(PSF) = 10.920 PO = 30.000 P = 4.0300 RN/L = 7.5000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0088	-.0184	-.0685	-.0489	-.0298						
.050	-.0938	-.0960	-.1080	-.1517	-.2009						
.074	-.1886	-.1481	-.1615	-.2160	-.2027						
.098	-.2167	-.1825	-.2096	-.2092	-.2131						
.111	-.0209	-.0110	-.0256	-.0290	-.0140	-.0418	-.0482	-.0359			
.139	.0208	-.0043	.0077	-.0028	.0310	-.0286	.0010999	.9999			
.168	.0133	-.0202	.0000	.0013	.0159	-.0220	-.0163	.0438			
.191	.0119	-.0021	-.0057	-.0273	.0492	-.0434	-.0425				
.255	.0020	-.0163	-.0330	-.0592	.0353	-.0552					
.344	.0197	-.0266	-.0930	-.0557	.0378	-.0283					
.392			-.0181	-.0181	.0512	-.1682					
.667	.999.9999	-.0744	-.1073	.999.9999	.0293	-.1464					
.702	-.0906	-.1075	-.1260	-.1222	-.0198	.999.9999					
.724	-.1930	-.1968	-.2123	-.2199	-.2060	.999.9999					
.744	.0718	.0328	.1066	.1357	.3014	.0984					
.755	.0451399.9999		.0583	-.0400	.1366	.0034					
.869	-.1469	-.1524	-.1112	.999.9999	.0438						
.902	.999.9999	-.1818	-.2174	.999.9999	-.1462						
.923	-.1905	-.2018	-.1185	.999.9999	-.0467	-.1629					
.945	-.1937	-.2142	-.2485	-.2342	-.2004	-.2549					
.982	.0877		.0201		.1391						

MACH (5) = 2.740 ALPHA (1) = 169.900 Q(PSF) = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0515	-.0568	-.0736	-.0707	-.0707						
.050	-.0788	-.0756	-.0901	-.1058	-.1040						
.074	-.0836	-.0860	-.1083	-.1199	-.1143						
.098	-.0927	-.0973	-.1150	-.1271	-.1108						
.111	-.0173	-.0293	-.0299	-.0587	-.0277	-.0190	-.0440	-.0305			
.139	.0100	-.0217	-.0172	-.0276	.0378	-.0087	-.0281999	.9999			
.168	-.0138	-.0288	-.0205	-.0361999	.0281	-.0070	-.0410	-.0044			
.191	-.0172	-.0313	-.0234	-.0358	.0263		-.0495				
.255	-.0087	-.0179	-.0550	.999.9999	.0381						
.314	.0002	-.0327	-.0311	-.0176	.0396						
.392			-.0129	.999.9999	.0372						
.667	.999.9999	-.0410	-.0652	.999.9999	.0372						
.702	-.0392	-.0491	-.0645	-.0495	.0193						
.724	-.1053	-.1041	-.1108	-.1058	-.0907						
.744	.0459	.0501	.0493	.1042	.999.9999						
.755	.0196999.9999		.0143	.0184	.0532						
			-.0111	.0854	.0948						

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

(R11070)

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 169.900

SECTION (1) SRB DEPENDENT VARIABLE CP

THE 1A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869 -.0470 -.0561 -.0519 999.9999 .0653
 .902 999.9999 -.0919 -.1065 999.9999 -.0600
 .923 -.0950 -.0889 -.0524 -.0011 -.0828
 .945 -.1114 -.1198 -.1071 -.0937 -.0634
 .982 .1689 .1267 .0653

PN/L 7.1000

MACH (6) = 3.480 ALPHA (1) = 169.900 Q1PSF = 6.8600 PO = 60.810 P = .81000

SECTION (1) SRB DEPENDENT VARIABLE CP

THE 1A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027 -.0198 -.0345 -.0452 -.0497 -.0486
 .050 -.0333 -.0418 -.0537 -.0627 -.0604
 .074 -.0277 -.0463 -.0610 -.0672 -.0678
 .098 -.0367 -.0520 -.0655 -.0711 -.0627
 .111 -.0119 -.0238 -.0226 -.0289 -.0320
 .139 -.0086 -.0182 -.0148 -.0103 -.0392
 .168 -.0125 -.0193 -.0170 -.0196 -.0302
 .191 -.0131 -.0164 -.0165 -.0227 -.0409
 .255 -.0097 -.0159 -.0165 -.0227 -.0398
 .344 -.0069 -.0152 -.0204 -.0311 -.0398
 .392 999.9999 -.0182 -.0396 -.0410 999.9999
 .667 999.9999 -.0215 -.0345 999.9999
 .702 -.0131 -.0383 -.0345 -.0226
 .724 -.0559 -.0548 -.0406 -.0587
 .744 .0392 .0477 .0370 .0454
 .755 .0364 999.9999 .0178 .0082
 .869 -.0103 -.0244 .0187 999.9999
 .902 999.9999 -.0508 .0565 999.9999
 .923 .0441 .0452 .0125 .0268
 .945 -.0094 .0452 .0497
 .932 .2037 .1649 .0396 .2839

TABULATED SOURCE DATA, MSFC TMT 603 (SA28F)

DATE 07 MAR 77

(R11071) (22 AUG 75)

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES

REFERENCE DATA

SRF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LRF = 146.0000 IN. YMRP = .0000 IN.
BRF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 45.000

MACH (1) = .596 ALPHA (1) = 179.920 Q(PSF) = 7.4200 PO = 39.000 P = 29.890 RN/L = 8.7000

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

DEPENDENT VARIABLE CP

X/L	.027	.1203	.1173	.1130	.1109	.1135
.050	.0863	.0855	.0855	.0797	.0740	.0734
.074	.0277	.0209	.0145	.0133	.0097	.0097
.098	.1408	.1506	.1459	.1140	.1547	.1547
.111	.4437	.4585	.4341	.4248	.4369	.4398
.139	.0929	.0898	.0938	.0868	.0966	.1042
.168	.0439	.0404	.0493	.0339	.0579	.0595
.191	.0222	.0229	.0303	.0377	.0451	.0508
.255	.0037	.0127	.0263	.0263	.0399	.0784
.344	.0400	.0090	.0431	.0466	.0393	.0952
.392	.999.9999	.0757	.0756	.0756	.0529	.0857
.667	.999.9999	.0189	.0547	.0507	.0529	.0417
.702	.2610	.2153	.0330	.0165	.0216	.0815
.744	.2774	.3448	.2237	.2181	.1897	.0147
.755	.1895999.9999	.1591	.2321	.2082	.1658	.1947
.869	.0791	.0140	.1591	.1346	.0948	.1191
.902	.999.9999	.2444	.0730	.0999	.0973	.0973
.923	.3703	.3726	.2488	.999.9999	.2476	.2476
.945	.4097	.5151	.3736	.3573	.3486	.3455
.982	.9053		.4234	.3734	.4074	.3830
			.8748		.8476	

MACH (2) = .909 ALPHA (1) = 179.920 Q(PSF) = 7.4500 PO = 22.020 P = 12.900 RN/L = 6.4000

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

DEPENDENT VARIABLE CP

X/L	.027	.1284	.1288	.1917	.1188	.1186
.050	.0958 <td>.0833 <td>.0833 <td>.0779 <td>.0815 <td>.0760</td> </td></td></td></td>	.0833 <td>.0833 <td>.0779 <td>.0815 <td>.0760</td> </td></td></td>	.0833 <td>.0779 <td>.0815 <td>.0760</td> </td></td>	.0779 <td>.0815 <td>.0760</td> </td>	.0815 <td>.0760</td>	.0760
.074	.0019 <td>.0280 <td>.0280 <td>.0135 <td>.0022 <td>.0137</td> </td></td></td></td>	.0280 <td>.0280 <td>.0135 <td>.0022 <td>.0137</td> </td></td></td>	.0280 <td>.0135 <td>.0022 <td>.0137</td> </td></td>	.0135 <td>.0022 <td>.0137</td> </td>	.0022 <td>.0137</td>	.0137
.098	.2474 <td>.2621 <td>.2621 <td>.2396 <td>.1622 <td>.2107</td> </td></td></td></td>	.2621 <td>.2621 <td>.2396 <td>.1622 <td>.2107</td> </td></td></td>	.2621 <td>.2396 <td>.1622 <td>.2107</td> </td></td>	.2396 <td>.1622 <td>.2107</td> </td>	.1622 <td>.2107</td>	.2107
.111	.3242 <td>.3106 <td>.2932 <td>.3069 <td>.3152 <td>.3167</td> </td></td></td></td>	.3106 <td>.2932 <td>.3069 <td>.3152 <td>.3167</td> </td></td></td>	.2932 <td>.3069 <td>.3152 <td>.3167</td> </td></td>	.3069 <td>.3152 <td>.3167</td> </td>	.3152 <td>.3167</td>	.3167
.139	.0754 <td>.0651 <td>.0654 <td>.0549 <td>.0612 <td>.0612</td> </td></td></td></td>	.0651 <td>.0654 <td>.0549 <td>.0612 <td>.0612</td> </td></td></td>	.0654 <td>.0549 <td>.0612 <td>.0612</td> </td></td>	.0549 <td>.0612 <td>.0612</td> </td>	.0612 <td>.0612</td>	.0612
.168	.0219 <td>.0229 <td>.0219 <td>.0320 <td>.0354999.9999</td> <td>.0478</td> </td></td></td>	.0229 <td>.0219 <td>.0320 <td>.0354999.9999</td> <td>.0478</td> </td></td>	.0219 <td>.0320 <td>.0354999.9999</td> <td>.0478</td> </td>	.0320 <td>.0354999.9999</td> <td>.0478</td>	.0354999.9999	.0478
.191	.0108 <td>.0057 <td>.0101 <td>.0209 <td>.0232 <td>.0370</td> </td></td></td></td>	.0057 <td>.0101 <td>.0209 <td>.0232 <td>.0370</td> </td></td></td>	.0101 <td>.0209 <td>.0232 <td>.0370</td> </td></td>	.0209 <td>.0232 <td>.0370</td> </td>	.0232 <td>.0370</td>	.0370
.255	.0097 <td>.0003 <td>.0192 <td>.0209 <td>.999.9999</td> <td>.0227</td> </td></td></td>	.0003 <td>.0192 <td>.0209 <td>.999.9999</td> <td>.0227</td> </td></td>	.0192 <td>.0209 <td>.999.9999</td> <td>.0227</td> </td>	.0209 <td>.999.9999</td> <td>.0227</td>	.999.9999	.0227
						.0396

(R11071)

MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F)

DATE 07 MAR 77 MACH (2) = .909 ALPHA (1) = 179.920

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	247.5000	270.0000	292.5000	315.0000
X/L	.344	-.0550	-.0448	-.0811	-.0883	-.0855	-.0764	-.0856	-.1211	-.1844	-.1009				
	.392				-.1569										
	.667	999.9999			.1379	999.9999									
	.702	.1594	.1661	.1436	.1244	.1159	.1002	.0952	.0862	.1348	.1086				
	.724	.0294	.0426	.0369	.0329	.0323	.0292	.0268	.0268		999.9999				
	.744	.1148	.1492	.1059	.1086	.0906	.0757	.0697	.0637						
	.755	.0836	.0999	.0730	.0622	.0606	.0461	.0406	.0339						
	.869	-.3561			-.3418	999.9999		-.3264							
	.902	999.9999	-.3140		-.2808	999.9999		-.3821							
	.923	-.4139	-.4535		-.4276	-.4095		-.4057			-.3897				
	.945	-.3981	-.5180		-.4425	-.4083		-.4691			-.3883				
	.982	-.6426			-.6212			-.6087							

MACH (3) = 1.202 ALPHA (1) = 179.920 OIPSF = 9.1600 PO = 22.010 P = 9.0500 RN/L = 6.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	247.5000	270.0000	292.5000	315.0000
X/L	.027	.0195	.0085		.0028	.0080			.0118						
	.050	-.0509	-.0706		-.0773	-.0635			-.0629						
	.074	-.2955	-.2232		-.2030	-.1868			-.1851						
	.098	-.5372	-.5311		-.5557	-.4506			-.5467						
	.111	-.1352	-.1427		-.1530	-.4149			-.2233						
	.139	-.0192	-.0094		-.0203	-.0307			-.0525						
	.168	-.0102	-.0088		-.0394	-.0405			-.0553						
	.191	-.0066	-.0187		-.0443	-.0487			-.0523						
	.255	-.0692			-.0699	999.9999			-.0613						
	.344	.0159	-.0345		-.1236	999.9999			-.0738						
	.392				-.0479				-.0493						
	.667	999.9999	.1220		.1142	999.9999			-.0162						
	.702	-.0345	-.0312		-.0164				-.0887						
	.724	-.1955	-.2007		-.1930	-.1769			-.0170						
	.744	.3271	.3284		.3090	.2887			-.1734						
	.755	.2485	.2489		.2274	.1965			.2121						
	.869	-.2166			-.2150	999.9999			.1593						
	.902	999.9999	-.4474		-.4337	999.9999			-.2032						
	.923	-.5049	-.4292		-.5271	-.4615			-.4046						
	.945	-.5717	-.6027		-.5942	-.5972			-.4763						
	.982	-.2454			-.2404				-.6246						

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (IR11071)

MACH (4) = 1.952 ALPHA (1) = 179.920 Q(PSF) = 11.020 PO = 30.010 P = 4.1300 RN/L = 7.6000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	.0251	.0213	.0139	.0065	.0072									
.050	-.1121	-.1121	-.0811	-.0644	-.0555									
.074	-.1706	-.1711	-.1594	-.1320	-.1264									
.098	-.2095	-.1941	-.1909	-.1445	-.1906									
.111	-.0081	.0033	-.0008	-.0275	-.1394	-.0332	-.0233	-.0123	.0170					
.139	-.0475	.0321	.0290	.0272	.0219	.0213	.0128	.0121	.0480	.999.9539				
.168	.0539	.0321	.0423	.0300	.0227	.0174	.999.9999	.0139	.0138	.0104	.1056			
.191	.0521	.0409	.0205	.0132	.0128	.0118	.0107	.0111	.0114					
.255	.0318	.0160	.0205	.0237	.0128	.0111								
.344	.0658	.0163	-.0305	.0112	.0163	.0325	.0349	.0058						
.392				.0055	.0055	.0364	.0364	.0198						
.667	.999.9999	-.0163	-.0208	-.0208	.999.9999	.0040	.0040	-.0170						
.702	-.0825	-.0806	-.0460	-.0437	-.0204	-.0261	-.0597	-.0597						
.724	-.1976	-.1874	-.1966	-.1888	-.1846	-.1734	-.1699	999.9999						
.744	.2472	.3026	.2188	.2626	.2167	.1879	.2595	.2949						
.755	.1865	.999.9999	.1742	.1780	.1573	.1377	.1521	.1833						
.809	-.0690	-.0734	-.0631	.999.9999	.999.9999	-.0588	-.0588							
.902	.999.9939	-.1864	-.1684	.999.9999	.999.9999	-.1948	-.1948	-.1833						
.923	-.1728	-.1537	-.1731	-.1588	-.1588	-.1778	-.1778	-.2853						
.945	-.2695	-.2612	-.2804	-.2852	-.2852									
.982	.0689		.0728			.0658								

MACH (5) = 2.740 ALPHA (1) = 179.920 Q(PSF) = 6.3700 PO = 30.020 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	-.0178	-.0111	-.0027	-.0020	-.0003									
.050	-.0574	-.0554	-.0501	-.0483	-.0446									
.074	-.0670	-.0767	-.0779	-.0737	-.0743									
.098	-.0774	-.0882	-.0974	-.0743	-.0956									
.111	.0160	.0143	-.0021	-.0184	-.0172	-.0172	-.0131	-.0178	-.0119	.0214				
.139	.0271	.0192	.0107	.0020	.0052	.0050	.0070	.0020	.0076	.999.9999				
.168	.0180	.0064	.0058	.0046	.0034	.999.9999	.0028	.0028	.0026	.0289				
.191	.0137	.0070	.0040	.0022	.0008	.0010	.0010	.0003	.0016					
.255	.0141	.0123	.0026	.0026	.999.9999	.999.9999	.0052	.0052						
.344	.0111	-.0246	-.0141	.0016	.0016	.0099	.0141	.0141	-.0034					
.392			.0002	.0002	.0106	.999.9999	.0038	.0038	-.0009					
.667	.999.9999	-.0099	-.0106	.999.9999	.999.9999	-.0044	-.0044	-.0038	-.0093					
.702	-.0398	-.0354	-.0252	-.0196	-.0052	-.0913	-.0913	-.0907	999.9999					
.724	-.1022	-.0944	-.0913	-.0944	-.0852	-.0913	-.0913	-.0907	-.0173					
.744	.1638	.1916	.1931	.1692	.1319	.1145	.1145	.0907	.999.9999					
.755	.1197	.999.9999	.1042	.0845	.0791	.0785	.0785	.0754	.1528	.0997				

MACB (5) = 2.740 ALPHA (1) = 179.920

SECTION 1158B

DEPENDENT VARIABLE CP

145TA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

x/L					
.869	-.0044	-.0149	-.0100	999.9999	-.0165
.902	999.9999	-.0968	-.0925	999.9999	-.0847
.923	-.0828	-.0670	-.0774	-.0682	-.0773
.945	-.1156	-.1120	-.1193	-.1192	-.1119
.982	-.1683		.1725		.1710

	ALPHA	BETA	P	RN/L	RN/L
7.000	179.800	0.855E-1	60.010	.81000	7.1000

SECTION 11 SRB

DEPENDENT VARIABLE CP

[illegible]

X/L	-0.057	-0.119	-0.0159	-0.0182	-0.0176
0.27	-0.0243	-0.0300	-0.0368	-0.0362	-0.0368
0.50	-0.0418	-0.0457	-0.0446	-0.0446	-0.0480
0.74	-0.086	-0.0542	-0.0463	-0.0463	-0.0576
0.98	-0.0316	-0.0083	-0.0069	-0.0418	-0.0074
1.11	-0.032	-0.0018	-0.0033	-0.0086	-0.0080
1.39	-0.0139	-0.0071	-0.0066	-0.0054	-0.0020
1.68	-0.0111	-0.0088	-0.0065	-0.0037	-0.0020
1.91	-0.0088	-0.0089	-0.0054	-0.0049	-0.0015
2.25	-0.0105	-0.0060	-0.0007	-0.0037	-0.0037
3.44	-0.0003	-0.0097	-0.0035	-0.0111	-0.0094
3.92	999.9999	-0.0058	-0.0001	-0.0012	-0.0035
667	999.9999	-0.0175	-0.0035	-0.0001	-0.0035
702	-0.0198	-0.0080	-0.0091	-0.0032	-0.0058
724	-0.0559	-0.0389	-0.0525	-0.0480	-0.0520
744	1.260	1.198	1.260	1.024	1.080
755	0.905999.9999	0.793	0.584	0.566	1.215
869	0.156	0.076	0.116	999.9999	0.0539
903	999.9999	-0.025	-0.0486	999.9999	0.089
923	-0.0384	-0.289	-0.317	-0.0266	-0.373
945	-0.0565	-0.0548	-0.0593	-0.0582	-0.316
982	2.037	-0.982	2.050	-0.982	-0.525
					-0.576
					2.106

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 194

MSFC TWT 603 (SA28F) SRB - ALL PROTOBERANCES

(R11072) (22 AUG 75)

REFERENCE DATA

QREF = 116.2000 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = 90.000

NACH (1) = .598 ALPHA (1) = 70.000 O(PSF) = 3.5400 PO = 18.000 P = 14.140 RN/L = 4.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.10510	.19026	.2825	.3823	.4823	.5823	.6823	.7823	.8823	.9823	1.0823	1.1823	1.2823	1.3823	1.4823	1.5823	1.6823	1.7823	1.8823	1.9823	2.0823	2.1823	2.2823	2.3823	2.4823	2.5823	2.6823	2.7823	2.8823	2.9823	3.0823	3.1823	3.2823	3.3823	3.4823	3.5823	3.6823	3.7823	3.8823	3.9823	4.0823	4.1823	4.2823	4.3823	4.4823	4.5823	4.6823	4.7823	4.8823	4.9823	5.0823	5.1823	5.2823	5.3823	5.4823	5.5823	5.6823	5.7823	5.8823	5.9823	6.0823	6.1823	6.2823	6.3823	6.4823	6.5823	6.6823	6.7823	6.8823	6.9823	7.0823	7.1823	7.2823	7.3823	7.4823	7.5823	7.6823	7.7823	7.8823	7.9823	8.0823	8.1823	8.2823	8.3823	8.4823	8.5823	8.6823	8.7823	8.8823	8.9823	9.0823	9.1823	9.2823	9.3823	9.4823	9.5823	9.6823	9.7823	9.8823	9.9823	10.0823																																																																																																		
.027	-1.0510	-1.9026	-1.8475	-2.2925	1.0323	1.0803	1.1112	1.1310	1.1253	1.1100	1.0863	1.0578	1.0253	1.0000	0.9723	0.9423	0.9100	0.8753	0.8383	0.7983	0.7553	0.7083	0.6583	0.6053	0.5483	0.4883	0.4253	0.3583	0.2883	0.2153	0.1383	0.0583	-0.0253	-0.1023	-0.1753	-0.2423	-0.3023	-0.3553	-0.4023	-0.4423	-0.4753	-0.5003	-0.5183	-0.5283	-0.5303	-0.5253	-0.5123	-0.4923	-0.4653	-0.4323	-0.3923	-0.3453	-0.2923	-0.2323	-0.1653	-0.0923	-0.0153	0.0623	0.1323	0.2023	0.2723	0.3423	0.4123	0.4823	0.5523	0.6223	0.6923	0.7623	0.8323	0.9023	0.9723	1.0423	1.1123	1.1823	1.2523	1.3223	1.3923	1.4623	1.5323	1.6023	1.6723	1.7423	1.8123	1.8823	1.9523	2.0223	2.0923	2.1623	2.2323	2.3023	2.3723	2.4423	2.5123	2.5823	2.6523	2.7223	2.7923	2.8623	2.9323	3.0023	3.0723	3.1423	3.2123	3.2823	3.3523	3.4223	3.4923	3.5623	3.6323	3.7023	3.7723	3.8423	3.9123	3.9823	4.0523	4.1223	4.1923	4.2623	4.3323	4.4023	4.4723	4.5423	4.6123	4.6823	4.7523	4.8223	4.8923	4.9623	5.0323	5.1023	5.1723	5.2423	5.3123	5.3823	5.4523	5.5223	5.5923	5.6623	5.7323	5.8023	5.8723	5.9423	6.0123	6.0823	6.1523	6.2223	6.2923	6.3623	6.4323	6.5023	6.5723	6.6423	6.7123	6.7823	6.8523	6.9223	6.9923	7.0623	7.1323	7.2023	7.2723	7.3423	7.4123	7.4823	7.5523	7.6223	7.6923	7.7623	7.8323	7.9023	7.9723	8.0423	8.1123	8.1823	8.2523	8.3223	8.3923	8.4623	8.5323	8.6023	8.6723	8.7423	8.8123	8.8823	8.9523	9.0223	9.0923	9.1623	9.2323	9.3023	9.3723	9.4423	9.5123	9.5823	9.6523	9.7223	9.7923	9.8623	9.9323	10.0023

(R11073)

MSFC TWT 603 (5A28F) SRB - ALL PROTUBERANCES

$\text{MACH} (2) = .905 \quad \text{ALPHA} (1) = 70.000$

SECTION 115RB

DEPENDENT VARIABLE CP

THE TA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
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X/L	-5451	-5237	-5356	-5217	-5517	-5095	.0522999.9999	-5247
.344	999.9999				-4508		999.9999	-4957
.667					-6184	.1354	999.9999	-5579
.702	-4863	-5071		-5398	-6267	-6471	.8196999.9999	-5410
.724	-4859	-4916		-5272	-5747	-5619	.9132999.9999	999.9999
.744	-4564	-4578		-4943	-7999	-6348	.8997999.9999	-5754
.755	-4578999.9999			-4470	-4632	-6403	.8063999.9999	-4774
.869	-3954		-4572		-4937		999.9999	
.902	999.9999		-3931		-5552		999.9999	
.923	-3592		-3828		-4228		1.1925	-4491
.945	-3556		-3942		-5351		1.1093	-4937
.982	-3159				-7179		.4706	

MACH (3) =	1.203	ALPHA (1) =	70.000	Q1P5F =	9.1600	P0	=	22.010	P	=	9.0400	RN/L	=	6.7000
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SECTION 115RB

DEPENDENT VARIABLE CP

TIME	0.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25	225.0000	270.0000	315.0000
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[illegible]

DATE 07 MAR 77

TABULATED SOURCE DATA. MSFC TWT 803 (5A28F)

WSEC TWT 503 (5A28F) SBB - ALL PROTUBERANCES (R11073)

	70 000	10 000	P	RN/L
7.4000				

SECTION 11 SRB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

71X

[illegible]

Run	Time	Temp	Pressure	Flow	Rate	Time	Temp	Pressure	Flow	Rate
1	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
2	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
3	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
4	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
5	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
6	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
7	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
8	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
9	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000
10	10.00	100.0	1.2100	30.040	5.1000	10.00	100.0	1.2100	30.040	5.1000

SECTION 1158B

DEPENDENT VARIABLE CP

0000 22.5000 45.0000 67.5000 30.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

7/11

[illegible]

999.9999
- .0252
.0107

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11073)

MACH (5) = 2.740 ALPHA (1) = 70.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1217	.0337	.9170	999.9999							
.902	999.9999	.0985	1.0542	999.9999							
.923	-.1174	.0647	1.1245	1.8910					.0232		
.945	-.1174	.0433	1.2605	1.7368					.0518		
.962	-.0992	-.1326		.9225							

MACH (6) = 3.480 ALPHA (1) = 70.000 O/P5F) = 6.0600 PO = 60.020 P = .81000 RN/L = 6.9000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0289	-.0424	.0900	1.0437	1.7822						
.050	-.0379	-.0446	.0956	1.0206	1.8046						
.074	-.0294	-.0492	.0855	.9947	1.8059						
.098	-.0351	-.0497	.0775	.9697	1.7954						
.111	-.0401	-.0632	.0618	.8984	1.4405	1.7601	.8988	.0578	-.0644		
.139	999.9999	-.0587	.0426	.8629	1.4275	1.6643	.8712	.0442	-.0632		
.168	-.0435	-.0548	.0354	.8526	1.4118	999.9999	.8599	.0364	-.0638		
.191	-.0452	-.0491	.0370	.8344	1.3994	999.9999	.8399	.0370			
.255	-.0441	-.0655	.0449	.8560	999.9999			.0505			
.344	-.0475	-.0435	.0499	.8498	1.3824	999.9999	.8566	.0528			
.392	999.9999	-.0745	.0545		999.9999			.0641			
.702	-.0571	-.0570	.0662	.8834	1.4202	999.9999	999.9999	.0815			
.724	-.0582	-.0588	.1383	.5128	1.7306	999.9999	999.9999	.999.9999			
.744	-.0655	-.0633	-.0159	.1869	.8259	999.9999	999.9999	.0109			
.755	-.0661	999.9999	-.0892	.3921	1.4439	999.9999	999.9999	.0420			
.869	-.0610	-.0756	.0702	.9150	999.9999						
.902	999.9999	-.0785	.1532	1.1096	999.9999			.0634			
.923	-.0627	-.0559	.1063	1.1237	1.9458			.0972			
.945	-.0598	-.0610	.0917	1.2641	1.7240						
.962	-.0446		-.0694		.9154						

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TABULATED SOURCE DATA, MSFC TMT 603 (SA28F)

PAGE 200

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11075) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 90.000

MACH (1) = .600 ALPHA (1) = 90.000 Q(PSF) = 7.5100 PO = 39.020 P = 29.810 RN/L = 8.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.6048	-.6062	-.6485	-.4148	.7041
.050	-.6087	-.6341	-.6199	-.4580	.7808
.074	-.6847	-.6985	-.6993	-.4463	.8411
.098	-.7148	-.7787	-.6960	-.3145	.9120
.111	-.6803	-.7783	-.8078	-.14612	-.1.3075
.139	.999.9399	-.6583	-.6811	-.8332	-.1.5247
.168	-.6069	-.6899	-.7269	-.1.3153	-.1.4052
.191	-.6318	-.6703	-.7794	-.8232	-.1.1556
.255	-.6066	-.5569	-.1.2021	-.2429	.999.9999
.344	-.5739	-.5743	-.4913	-.9295	-.1.1799
.392	.999.9999	-.5827	-.7971	.999.9999	.999.9999
.667	.999.9999	-.5850	-.6856	-.8144	-.1.1291
.702	-.5402	-.5290	-.6840	-.1.1117	-.1.3396
.744	-.5398	-.5435	-.5808	-.7806	-.1.2607
.755	-.5630999.9999	-.5995	-.5875	-.6322	-.1.0932
.869	-.6246	-.6730	-.8681	-.3324	.999.9999
.902	.999.9999	-.6730	-.9548	-.4261	.999.9999
.923	-.6582	-.6965	-.8118	-.1733	.999.9999
.945	-.6626	-.7274	-.7947	.3043	-.1.1374
.982	-.7863	-.7863	-.2.0874	.1.0700	-.8589

MACH (2) = .906 ALPHA (1) = 90.000 Q(PSF) = 7.4300 PO = 22.010 P = 12.920 RN/L = 6.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.5713	-.5701	-.5679	-.0643	.7974
.050	-.5827	-.5693	-.5692	-.0037	.8834
.074	-.5841	-.5841	-.5867	.0566	.9534
.098	-.5908	-.5807	-.6236	.1520	.1.0221
.111	-.5980	-.6021	-.5968	-.5767	.8535
.139	.999.9999	-.5928	-.6190	-.6296	.9424
.168	-.5592	-.5699	-.5713	-.7207	.9616999.9999
.191	-.5458	-.5619	-.5780	-.5713	.9523999.9999
.255	-.5148	-.5391	-.5955	-.5881	.999.9999
.255	-.5148	-.5391	-.5504	.2431	.999.9999

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11075)

MACH (4) = 1.965 ALPHA (1) = 90.000 Q(PSF) = 10.940 PO = 30.000 P = 4.0500 RN/L = 7.4000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.027	-.2541	-.2553	-.1837	.6538	1.3066
.050	-.2580	-.2575	-.1600	.6983	1.3630
.074	-.2583	-.2608	-.1486	.7235	1.4177
.098	-.2587	-.2639	-.1198	.7919	1.4865
.111	-.2584	-.2629	-.0985	.8340	1.5229
.135	999.9999	-.2608	-.2614	.8567	1.5442
.168	-.2515	-.2500	-.2474	.8694	1.5432
.191	-.2381	-.2393	-.2303	.8666	1.5291
.255	-.2420	-.2415	-.1123	.8666	999.9999
.344	-.2487	-.2470	-.1122	.8666	1.4276
.392	999.9999	-.2428	-.1103	.8764	999.9999
.667	999.9999	-.2452	-.1105	.8764	999.9999
.702	-.2470	-.2448	-.0322	.8764	1.4177
.724	-.2461	-.2448	-.0322	.8764	1.4242
.744	-.2491	-.2492	-.1100	.8764	1.4184
.755	-.2500	999.9999	-.1052	.8764	1.4189
.869	-.2467	-.2474	-.1286	.8764	999.9999
.902	999.9999	-.2503	-.1440	.8764	999.9999
.923	-.2557	-.2510	-.1643	.8764	1.6340
.945	-.2506	-.2593	-.0691	.8764	1.6535
.982	-.1561	-.2238	-.2238	.8764	1.6237

MACH (5) = 2.740 ALPHA (1) = 90.000 Q(PSF) = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.1000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000

X/L

.027	-.0731	-.0871	-.0240	.7868	1.5056
.050	-.0810	-.0901	-.0137	.8151	1.5511
.074	-.0792	-.0943	-.0094	.8179	1.5900
.098	-.0871	-.0961	.0087	.8715	1.6279
.111	-.0932	-.1070	.0165	.9110	1.6561
.139	999.9999	-.1040	-.0967	.9407	1.5271
.168	-.0932	-.1126	.0063	.9495	1.5299
.191	-.0998	-.0944	.0093	.9555	1.5244
.255	-.1023	-.1132	.0167	.9555	999.9999
.344	-.1059	-.0919	-.0932	.9555	1.5251
.392	999.9999	-.1247	.0232	.9446	999.9999
.667	999.9999	-.1059	.0202	.9446	999.9999
.702	-.1174	-.1168	-.1023	.9446	1.5123
.724	-.1174	-.1168	.0657	.9446	1.5070
.744	-.1186	-.1150	-.1307	.9446	1.5050
.755	-.1187	999.9999	-.1332	.9446	1.5062

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TABULATED SOURCE DATA, MSFC TWT 803 (SA28F1)

PAGE 204

MSFC TWT 603 (SA2BF) SRB - ALL PROTUBERANCES

(R11078) (22 AUG 73)

REFERENCE DATA

SREF	=	116.2600	SO.FT.	XMRP	=	1044	.0000	IN.
LREF	=	146.0000	IN.	YMRP	=		.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=		.0000	IN.
SCALE	=		.0055					

PARAMETRIC DATA

RM-SCH - 1.000 PHI - 90.000

MACH (1) =	.598	ALPHA (1) =	110.000	Q(PSF) =	3.5400	P0 =	18.000	P =	14.130	RM/L =	4.1000
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SECTION 115RB

DEPENDENT VARIABLE CP

THE TA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	270.0000	315.0000
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[illegible]

REF ID: A63061 608 - ALL BOOTHBY BRANCHES (R11077) (22 AUG 75)

REFERENCE DATA

SRCF	=	116.2600	SQ.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

PARAMETRIC DATA

9N-SCM - 2.000 PM1 • 90.000

DATE	DESCRIPTION	AMOUNT	BALANCE	CHECK NO.	DATE	DESCRIPTION	AMOUNT	BALANCE	CHECK NO.
10/1/80	OPENING BALANCE		0.00		10/1/80	DEPOSIT	100.00	100.00	
10/5/80	PAYROLL	50.00	50.00		10/5/80	DEPOSIT	50.00	100.00	
10/10/80	RENT	25.00	75.00		10/10/80	DEPOSIT	25.00	100.00	
10/15/80	UTILITIES	10.00	85.00		10/15/80	DEPOSIT	10.00	100.00	
10/20/80	FOOD	15.00	70.00		10/20/80	DEPOSIT	15.00	100.00	
10/25/80	TRANSPORT	20.00	50.00		10/25/80	DEPOSIT	20.00	100.00	
10/30/80	SALES	30.00	20.00		10/30/80	DEPOSIT	30.00	100.00	
10/31/80	CLOSING BALANCE		0.00		10/31/80	DEPOSIT	0.00	100.00	

SECTION 115RB
BDS 11 NO 11335

DEPENDENT VARIABLE CP

0000 22 5000 45 0000 67 5000 90 0000 12 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

X/L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82																		

NO.	NAME	AGE	SEX	HT	WT	HAIR	EYES	SKIN	TEETH	NOSE	THROAT	HEART	LUNGS	ABDOMEN	GENITALS	PO	P	RN/L	RN/L
1	JOHN	22	M	5' 10"	170	B	B	F	1	1	1	1	1	1	1	1	22.010	13.010	6.3000

SECTION () SRB

DEPENDENT VARIABLE CP

	0000	25	5000	75	5000	90	0000	112	5000	135	0000	157	5000	180	0000	225	0000	270	0000	315	0000
0000	25	5000	75	5000	90	0000	112	5000	135	0000	157	5000	180	0000	225	0000	270	0000	315	0000	

[illegible]

TABULATED SOURCE DATA, MSFC TNT 603 (SA28F)

DATE 07 MAR 77

MSFC TNT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11077)

MACH (2) = .900 ALPHA (1) = 110.000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.344	-.4145	-.4192	-.4275	-.4546	-.5124	.8158999.9999					-.4553
.392				-.5299		999.9999					-.5436
.667	999.9999			-.5558	.1465	999.9999					-.5395
.702	-.5659	-.5894	-.5673	-.5951	-.6589	.8577999.9999					-.5578
.724	-.5788	-.5822	-.5626	-.6941	-.7796	.7530999.9999					999.9999
.744	-.5917	-.6087	-.7586	-.9494	-.5327	.9042999.9999					-.7545
.755	-.6093999.9999		-.8040	-.7203	-.6487	.8671999.9999					-.7246
.869	-.7644		-.7701	-.7807	.1526	999.9999					
.902	999.9999		-.7532	-.7678	.0796	999.9999					-.9896
.923	-.7672		-.7861	-1.0938	.2769	1.1295					-.6209
.945	-.7698		-.8591	-.7902	.6507	1.1420					
.982	-.5463			-.8428		1.2169					

MACH (3) = 1.199 ALPHA (1) = 110.000 Q(PSF) = 9.1400 PO = 22.010 P = 9.0900 RN/L = 6.7000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.027	-.3609	-.3607	-.3574	-.3574	-.0181	.6002					
.050	-.3583	-.3617	-.3639	-.3639	.0485	.6691					
.074	-.3577	-.3718	-.3684	-.3684	.0988	.7290					
.098	-.3752	-.3882	-.4068	-.4068	.1855	.7997					
.111	-.3946	-.4068	-.4186	-.4374	.1715	.6415	.8152				-.4233
.139	999.9999	-.4265	-.4139	-.4075	.4016	.9234	1.1974				-.4067
.168	-.4330	-.4366	-.4325	-.4263	.4455	.9820999.9999	.9999				-.4157
.191	-.4406	-.4394	-.4301	-.4284	.1835	.9929999.9999	.4591				-.4374
.255	-.4416	-.4316	-.4607	-.4270	.4770	999.9999					-.4332
.344	-.4446	-.4660	-.4658	-.4658	1.0388999.9999	999.9999					-.4280
.392			-.4809	-.4809	.5040	999.9999					-.5792
.667	999.9999	-.4051	-.4212	-.4286		999.9999					-.4100
.702	-.4331	-.4249	-.4303	-.4511	-.1500	1.0758999.9999					-.4316
.724	-.4458	-.4422	-.4480	-.4715	-.2444	.9632999.9999					999.9999
.744	-.4439	-.4554	-.4980	-.4715	-.0397	1.1274999.9999					-.5516
.755	-.4518999.9999		-.4734	-.4724	-.1313	1.0883999.9999					-.5521
.869	-.5266	-.5163	-.4724	-.5169	.5066	999.9999					
.902	999.9999	-.5781	-.5230	-.5588	.4329	999.9999					-.4982
.923	-.4999	-.5338	-.5230	-.5230	.6132	1.3046					-.1364
.945	-.4877	-.5676	-.5676	-.5676	.9137	1.3155					
.982	-.2500			-.5152		1.3860					

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11077)

MACH (5) = 2.740 ALPHA (1) = 110.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.069	-.1277	-.1338	-.0245	.8208	999.9999	
.902	999.9999	-.1338	-.0634	.6908	999.9999	
.923	-.1113	-.1131	-.0167	1.0044	1.6028	-.0670
.945	-.1156	-.1138	.0161	1.2095	1.4782	.0354
.982	.1649		.0477		1.7490	

MACH (6) = 3.480 ALPHA (1) = 110.000 Q1PSF = 6.8600 PO = 60.020 P = .81000 RN/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0209	-.0345	-.0334	.4163	.8932	
.050	-.0294	-.0373	-.0267	.4445	.9259	
.074	-.0283	-.0429	-.0193	.4631	.9547	
.098	-.0362	-.0469	-.0334	.4518	1.0055	
.111	-.0418	-.0565	.0139	.2385	1.0713	.6379
.139	999.9999	-.0547	-.0508	.3442	1.3346	.8396
.168	-.0497	-.0632	-.0491	.8272	1.4982	.0483
.191	-.0531	-.0441	.0505	.8517	1.3684	.8542
.255	-.0554	-.0655	-.0458	.3523	1.3667	.0533
.344	-.0599	-.0445	.0523	.8554	999.9999	.0547
.392			.0522	.3483	1.3701	.0567
.667	999.9999	-.0745	.0533	.8543	999.9999	.0573
.702	-.0700	-.0565	.0424		999.9999	.0545
.724	-.0690	-.0712	.0505	.3502	1.4147	.0601
.744	-.0717	-.0734	.0206	.2319	.7739	999.9999
.755	-.0734	999.9999	.0400	.4817	1.5971	.1152
.869	-.0751		.0725	.3791	1.4461	.0893
.902	999.9999	-.0802	.0325	.8385	999.9999	
.923	-.0661	-.0790	-.0035	.6683	999.9999	-.0165
.945	-.0610	-.0634	.0268	1.0655	1.6925	.0415
.982	.2055	-.0706	.0312	1.1373	1.4343	
			.0843		1.7571	

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

PARAMETRIC DATA

SREF	=	116.2600	50.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
OREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

[illegible]

DEPENDENT VARIABLE CP

[illegible]

OLEO

027	- 1424	- 1408	- 1600	- 4967	- 0430	
050	- 1644	- 1643	- 1748	- 5256	- 0503	- 2494
074	- 1944	- 1961	- 2088	- 5169	- 0556	- 2839
098	- 2352	- 2259	- 2582	- 5699	- 0798	- 3245
111	- 2724	- 2639	- 2260	- 9785	- 2613	- 7239
139	999 9999	- 2948	- 2705	- 1794	- 2404	- 3020
168	- 3009	- 3340	- 3190	- 9372	9048	- 5664
191	- 3553	- 3612	- 3507	- 10042	3079999 9999	- 7080
255	- 4081	- 4195	- 3507	- 10480	3198999 9999	- 7883
344	- 4661	- 4741	- 4774	- 8939	999 9999	
382			- 4774	- 10499	3445999 9999	- 10044
667	999 9999	- 4137	- 1229	- 9630	999 9999	- 8760
702	- 4921		- 10049	- 3354	999 9999	- 16733
724	- 7397	- 3948	- 4681	- 9700	4114999 9999	- 15024
744	- 4154	- 6413	- 5752	- 7280	- 3676999 9999	999 9999
		- 3541	- 3709	- 7856	4907999 9999	- 11678
			- 744	- 8046	4255000 9999	- 14819

[illegible]

DEPENDENT VARIABLE CP

SECTION 1.17.010

1501

027	- 2747	- 2882	- 2826	- 5168	- 0778	- 0707	- 4993	- 3852	- 3439
050	- 2771	- 2892	- 3408	- 5403	- 3338	- 5417	- 1669	- 4602	- 3731
074	- 3010	- 3103	- 3303	- 4554	- 4089999	9999	- 1163	- 4817	- 4050
098	- 3248	- 3316	- 3854	- 4642	- 4212999	9999		- 5027	
111	- 3433	- 3470	- 3904	- 5202	999	9999			
139	- 3629	- 3688	- 4243	- 5693	- 0912				
168	- 3999	- 3714	- 4743	- 7548					
191	- 3690	- 3922	- 4326	- 7037					
191	- 3963	- 4146	- 4309	- 7527					
255	- 4461	- 4676	- 5626						

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11078)

MACH (4) = 1.952 ALPHA (1) = 130.100 Q(PSF) = 11.020 PO = 30.020 P = 4.1300 RN/L = 7.5000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.607	.702	.724	.744	.755	.869	.902	.923	.945	.982
-2297	-2321	-2359	-2421	-2483	-2593	-2592	-2589	-2619	-2783	-2774	-2511	-2777	-2623	-2705	-2445	-2435	-2662	-2778	-2712	-2507	-1692
.2605	.3151	.3362	.4324	.6463	.8817	.8309	.8219	.8276	.8276	.8276	.8953	.8953	.8953	.8953	.8953	.8953	.8953	.8953	.8953	.8953	.8953
.3970	.5136	.4805	.2082	.1731	.2590	.1732	.1747	.1697	.1867	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999

MACH (5) = 2.740 ALPHA (1) = 130.100 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RN/L = 5.1000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.607	.702	.724	.744	.755
-0919	-0980	-1052	-1095	-1149	-1149	-1149	-1149	-1149	-1149	-1149	-1149	-1149	-1149	-1149	-1149	-1149
.3283	.3685	.3922	.5232	.7647	.9034	.8806	.8606	.8718	.8718	.8718	.8718	.8718	.8718	.8718	.8718	.8718
.4826	.5499	.5414	.0566	.0330	.1113	.1149	.0342	.0336	.0208	.0317	.0487	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11078)

MACH (5) = 2.740 ALPHA (1) = 130.100

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L

.869	-.1307	-.1271	-.0791	.6410	999.9999
.902	999.9999	-.1308	-.1234	.2117	999.9999
.923	-.1222	-.1253	-.0378	.6848	-.0396
.945	-.1186	-.1313	-.1113	.7120	-.1162
.982	.2967		.2059	1.6124	

MACH (6) = 3.480 ALPHA (1) = 130.100 Q(PSF) = 6.8600 PO = 60.000 P = .81000 RN/L = 7.0000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L

.027	-.0179	-.0372	-.0576	.1086	.3245
.050	-.0316	-.0423	-.0587	.1379	.3622
.074	-.0202	-.0491	-.0587	.1587	.4005
.098	-.0327	-.0531	-.0559	.1446	.5640
.111	-.0400	-.0520	-.0147	.2000	.8182
.139	999.9999	-.0486	-.0542	.2210	.9196
.168	-.0491	-.0423	-.0135	.2195	.9098999.9999
.191	-.0525	-.0372	-.0123	.2133	.8933999.9999
.255	-.0554	-.0616	-.0128	.5533	.999.9999
.344	-.0604	-.0350	-.0127	.2062	.9012999.9999
.392	999.9999	-.0689	-.0156	.5240	.999.9999
.702	-.0689	-.0394	-.0125	.2038	.8264999.9999
.724	-.0678	-.0694	-.0388	.0545	.1931999.9999
.744	-.0666	-.0672	-.0052	.5815	1.6818999.9999
.755	-.0678999.9999		-.0565	.3594	1.0899999.9999
.869	-.0728	-.0694	-.0249	.6813	.999.9999
.902	999.9999	-.0711	-.0610	.2314	.999.9999
.923	-.0666	-.0700	-.0049	.6387	1.1157
.945	-.0700	-.0756	-.0576	.5060	.6650
.982	.3233		.1942	1.6530	

TABULATED SOURCE DATA, MSFC TWT 803 (SA28F)

DATE 07 MAR 77

(R11079) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

PARAMETRIC DATA

SRF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055
 MACH (1) = .598 ALPHA (1) = 149.020 O(PSF) = 7.4700 PO = 38.020 P = 29.860 RN/L = 8.7000
 RN-SCH = 2.000 PHI = 90.000

REFERENCE DATA

DEPENDENT VARIABLE CP

SECTION (1) SRB
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0100	.0170	.0200	.1331	-.0140
.050	-.0334	-.0220	-.0220	-.0216	-.0558	
.074	-.1063	-.0934	-.0918	-.3027	-.1141	
.098	-.2281	-.1805	-.2762	-.4900	-.1870	
.111	-.3628	-.2599	-.3686	-.8243	-.6559	-.5054
.139	.999.9999	-.2404	-.2400	-.5611	.0097	.3006
.168	-.1811	-.2607	-.2487	-.5578	.0815999.9999	-.3044
.191	-.2286	-.2673	-.2294	-.5600	.0924999.9999	-.2211
.255	-.2425	-.2725	-.3181	-.5660	.999.9999	-.4704
.344	-.2832	-.2790	-.3181	-.5660	.1117999.9999	-.5482
.392				-.5714	.999.9999	-.5007
.667	.999.9999	-.1919	-.7241	-.2120	.999.9999	-.7331
.702	-.2843	-.4342	-.5714	-.4541	.2388999.9999	-.6579
.724	-.5408	-.5324	-.5279	-.5206	-.6529999.9999	.999.9999
.744	-.0781	-.1884	-.4046	-.2846	.5371999.9999	-.4073
.755	-.2087999.9999		-.3537	-.5583	.2720999.9999	-.5960
.869	-.3861	-.5533	-.8953	-.2026	.999.9999	
.902	.999.9999	-.4118	-.6367	-.4178	.999.9999	-.6625
.923	-.3684	-.4141	-.5538	-.4495	.4890	-.5979
.945	-.3352	-.4590	-.6145	-.7487	-.8433	
.982	-.1019		-.6394		.8624	

MACH (2) = .906 ALPHA (1) = 149.020 O(PSF) = 7.4300 PO = 22.000 P = 12.930 RN/L = 6.4000

DEPENDENT VARIABLE CP

SECTION (1) SRB
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0202	-.0172	-.0128	-.0421	.0090
.050	-.1293		-.1298	-.1337	-.1453	-.0774
.074	-.2183		-.2323	-.3282	-.3516	-.2608
.098	-.3385		-.3077	-.4411	-.4693	-.4684
.111	-.4451	-.4422	-.3864	-.3759	-.4791	-.4745
.139	.999.9999	-.3207	-.3158	-.5288	-.6342	-.4268
.168	-.2363	-.3225	-.2981	-.3064	-.2249	-.4925
.188	-.2794	-.3250	-.2941	-.5172	-.2127	-.3020
.191	-.2794			-.5848	-.1949	-.4636
.255	-.2809		-.3219	-.4534	-.2133	-.4810

TABULATED SOURCE DATA, MSFC TWT 603 (SA20F)

MACH (4) = 1.967 ALPHA (1) = 149.000 Q(PSF) = 10.940 PO = 30.010 P = 4.0400 RN/L = 7.4000
 MSFC TWT 603 (SA20F) SRB - ALL PROTUBERANCES (R11079)

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	-.1511	-.1702	-.1872	-.2285	-.2071	-.1898	-.1604	-.1771	-.1848	-.1853	-.1564	-.2117	-.2420	-.2853	-.2073	-.1902	-.2195	999.9999	999.9999	999.9999	999.9999
	-.1455	-.1651	-.1869	-.2357	-.2105	-.1828	-.1763	-.1771	-.1848	-.1853	-.1564	-.2117	-.2420	-.2853	-.2073	-.1902	-.2195	999.9999	999.9999	999.9999	999.9999
	-.1494	-.1633	-.1887	-.2352	-.2094	-.1827	-.1763	-.1771	-.1848	-.1853	-.1564	-.2117	-.2420	-.2853	-.2073	-.1902	-.2195	999.9999	999.9999	999.9999	999.9999
	-.1796	-.1855	-.1661	-.1791	-.0900	-.0819	-.1205	-.1451	-.0836	-.1253	-.0656	-.1406	-.0568	-.2158	-.1923	-.0779	-.1596	999.9999	999.9999	999.9999	999.9999
	-.0745	-.0492	-.0249	-.0720	-.2594	-.0376	-.3174	-.3433	-.3131	-.0999	-.0999	-.0999	-.0999	-.0999	-.0999	-.0999	-.0999	999.9999	999.9999	999.9999	999.9999
	-.2168	-.2094	-.2124	-.1852	-.1970	-.1714	-.2005	-.2191	-.1784	-.2191	-.2259	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	-.1629	-.2595	-.0415	-.1320	-.1883	-.2032	-.2038	-.0913	-.0919	-.0888	-.0907	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999

MACH (5) = 2.740 ALPHA (1) = 149.000 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RN/L = 5.1000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755
	-.0560	-.0713	-.0821	-.0756	-.0926	-.0882	-.0804	-.0756	-.0900	-.0894	-.0719	999.9999	999.9999	999.9999	999.9999	999.9999
	-.0750	-.0792	-.0876	-.0944	-.0992	-.0980	-.0961	-.0835	-.0955	-.0804	-.0719	999.9999	999.9999	999.9999	999.9999	999.9999
	-.0834	-.0808	-.0937	-.0967	-.0554	-.0683	-.0737	-.0774	-.0797	-.0804	-.0719	999.9999	999.9999	999.9999	999.9999	999.9999
	-.0780	-.0664	-.0627	-.0524	-.0198	-.0287	-.0287	-.0208	-.0206	-.0167	-.0167	999.9999	999.9999	999.9999	999.9999	999.9999
	-.0101	-.0246	-.0410	-.1346	-.3315	-.3647	-.3647	-.3546	-.3546	-.3546	-.3546	999.9999	999.9999	999.9999	999.9999	999.9999
	-.0949	-.0937	-.0919	-.0931	-.2032	-.2032	-.2032	-.2032	-.2032	-.2032	-.2032	999.9999	999.9999	999.9999	999.9999	999.9999
	-.0913	-.0913	-.0913	-.0913	-.0913	-.0913	-.0913	-.0913	-.0913	-.0913	-.0913	999.9999	999.9999	999.9999	999.9999	999.9999
	-.0919	-.0888	-.0907	-.0967	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	-.0463	-.0463	-.0463	-.0463	-.0463	-.0463	-.0463	-.0463	-.0463	-.0463	-.0463	999.9999	999.9999	999.9999	999.9999	999.9999

TABULATED SOURCE DATA, MSFC TNT 603 (SA28F)

DATE 07 MAR 77

(R11079)

MSFC TNT 603 (SA28F) SR8 - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 149.000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1149	-.0670	.2159	999.9999
.902	-.1259	-.0882	.0070	999.9999
.923	-.1180	-.0773	.4686	-.0773
.945	-.1283	-.1160	.1434	-.1125
.982	.2578	.2530	1.1129	

MACH (6) = 3.480 ALPHA (1) = 149.000 Q(PSF) = 6.8600 PO = 60.010 P = .81000 RN/L = 7.0000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0238	-.0384	-.0503	-.0351	.0404
.050	-.0339	-.0424	-.0531	-.0260	.0541
.074	-.0266	-.0497	-.0582	-.0204	.0702
.098	-.0345	-.0531	-.0593	-.0058	.1480
.111	-.0424	-.0587	-.0102	.2224	.3724
.139	999.9999	-.0565	-.0503	.2314	.4051
.168	-.0497	-.0486	-.0226	.0703	.3859
.191	-.0503	-.0430	-.0255	.2100	.3876999.9999
.255	-.0520	-.0378	-.0277	.0658	.3776999.9999
.344	-.0503	-.0339	-.0283	.2320	999.9999
.392	999.9999	-.0566	-.0384	.0647	.3901999.9999
.667	-.0717	-.0486	-.0463	.2472	999.9999
.702	-.0768	-.0785	-.0723	.0657	.4363999.9999
.724	-.0384	-.0441	-.0525	-.0204	.0347999.9999
.744	-.0463	-.0499	-.0514	.2595	.8768999.9999
.755	-.0463999.9999	-.0514	-.0052	.1480	.5733999.9999
.869	-.0531	-.0616	-.0334	.2174	999.9999
.902	999.9999	-.0688	-.0503	.0375	999.9999
.923	-.0616	-.0694	-.0255	.2799	.3901
.945	-.0672	-.0745	-.0587	.0967	.1610
.982	.2974		.2923		.9806

TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

MSFC THT 603 (SA28F) SRB - ALL PROTOBERANCES

PARAMETRIC DATA

RM-SCH = 2.000 PHI = 90.000

MACH (1) = .596 ALPHA (1) = 169.900 O(PSF) = 7.4400 PO = 38.010 P = 29.880 RN/L = 8.8000

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L	.027	.1098	.1117	.1204	.1184	.1174	.1120	.1320	.0262	.0711	.999.9359	.2259	.0871	.999.9359	.5216	.5128	.5813
.050	.0745	.0802	.0844	.0844	.0630	.0533	.0533	.0347	.0328	.2991	.7310	.6615	.5315	.3319	.1537	.1132	.0750
.074	.0077	.0214	.0164	.0164	.0328	.0347	.0347	.0347	.0328	.2991	.7310	.6615	.5315	.3319	.1537	.1132	.0750
.098	.1148	.1095	.1563	.1563	.2991	.1849	.1849	.1849	.2991	.7310	.6615	.5315	.3319	.1537	.1132	.0750	.0750
.111	.2720	.3060	.3275	.3275	.6530	.7275	.7275	.7275	.6530	.7275	.6530	.7275	.6530	.7275	.6530	.7275	.6530
.139	.999.9999	.1135	.1184	.1550	.1655	.1655	.1655	.1655	.1655	.1655	.1655	.1655	.1655	.1655	.1655	.1655	.1655
.168	.0154	.0627	.1164	.1164	.1191	.1191	.1191	.1191	.1191	.1191	.1191	.1191	.1191	.1191	.1191	.1191	.1191
.191	.0561	.0572	.1031	.1031	.1033	.1033	.1033	.1033	.1033	.1033	.1033	.1033	.1033	.1033	.1033	.1033	.1033
.255	.0547	.0529	.0967	.0967	.0590	.0590	.0590	.0590	.0590	.0590	.0590	.0590	.0590	.0590	.0590	.0590	.0590
.344	.0563	.0550	.1182	.1182	.1105	.1105	.1105	.1105	.1105	.1105	.1105	.1105	.1105	.1105	.1105	.1105	.1105
.392	.999.9999	.0410	.1325	.1325	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422
.667	.0646	.0440	.0160	.0160	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422	.0422
.702	.0814	.1172	.1274	.1274	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052
.724	.0814	.1172	.1274	.1274	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052	.1052
.744	.0650	.0786	.1909	.1909	.3329	.3329	.3329	.3329	.3329	.3329	.3329	.3329	.3329	.3329	.3329	.3329	.3329
.755	.0435	.0999.9999	.1097	.1590	.1698	.1698	.1698	.1698	.1698	.1698	.1698	.1698	.1698	.1698	.1698	.1698	.1698
.869	.3442	.3936	.3613	.3613	.0444	.0444	.0444	.0444	.0444	.0444	.0444	.0444	.0444	.0444	.0444	.0444	.0444
.902	.999.9999	.4335	.5120	.5120	.3436	.3436	.3436	.3436	.3436	.3436	.3436	.3436	.3436	.3436	.3436	.3436	.3436
.923	.4344	.4578	.5145	.5145	.4743	.4743	.4743	.4743	.4743	.4743	.4743	.4743	.4743	.4743	.4743	.4743	.4743
.945	.3820	.4301	.5120	.5120	.7036	.7036	.7036	.7036	.7036	.7036	.7036	.7036	.7036	.7036	.7036	.7036	.7036
.982	.4604	.4604	.5166	.5166	.5813	.5813	.5813	.5813	.5813	.5813	.5813	.5813	.5813	.5813	.5813	.5813	.5813

MACH (2) = .899 ALPHA (1) = 169.900 O(PSF) = 7.3700 PO = 22.010 P = 13.030 RN/L = 6.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L	.027	.0915	.0782	.0579	.0720	.0823	.0823	.0291	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812
.050	.0407	.0292	.0292	.0523	.0358	.0291	.0291	.0291	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812
.074	.0367	.0571	.0571	.2095	.2333	.2333	.2333	.2333	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812
.098	.1794	.2357	.2357	.3650	.3542	.3542	.3542	.3542	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812
.111	.3307	.3690	.3690	.3718	.3718	.3718	.3718	.3718	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812
.139	.999.9999	.1352	.1308	.1386	.1247	.1247	.1247	.1247	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812
.168	.0279	.0749	.0771	.0802	.0489	.0489	.0489	.0489	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812
.191	.0668	.0689	.0771	.0961	.0809	.0809	.0809	.0809	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812
.255	.0669	.0606	.0606	.0890	.0426	.0426	.0426	.0426	.2146	.3383	.3422	.5877	.3144	.3737	.1443	.1305	.0812

MSFC INT 603 (SA28F) SRB - ALL PROTEGERANCES

(R) 10801

NACH (2) = .899 ALPHA (1) = 169.900

SECTION 115RB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000|12.5000|35.0000|57.5000|80.0000225.0000270.0000315.0000

71X

344	- .0802	- .0843	- .1218	- .1387	- .1161	- .0231999	9999	- .1366
392				- .1504		999	99999	- .1585
667	999	9999	.0368	.0250		999	99999	.0293
702	.0030	- .0020	- .0931	.0805		.0645		- .0729
724	- .0133	- .0491	- .1513	- .1687	- .0796	.0318999	99999	999
744	- .0595	- .0960	- .0356	.1129	- .2330	- .2584999	99999	999
755	- .1170999	9999	- .1021	- .0115	.2010	.2925999	99999	.0430
869	- .4049			- .4415	.0661	.1597999	99999	- .0633
902	999	9999	- .4302	- .4469		- .2750	999	99999
923	- .3653		- .4008	- .4512		- .4309	999	99999
945	- .3210		- .4062	- .4430		- .4464	- .5185	- .4403
982	- .3269		- .3401	- .4430		- .6684	- .6784	- .4297
				- .3906			- .4140	

MACH (3) =	1.197	ALPHA (1) =	169.880	Q(PSF) =	9.1400	P0	=	22.010	P	=	9.1100	RN/L	=	6.8000
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SECTION : 11SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7/1X

[illegible]

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STABILIZED SOURCE DATA. MSFC TWT 603 (SA28F)

WEER TWT 603 (5420) CRR - ALL PROTEUBRANCES (R11080)

MACH (4) = 1.981 ALPHA (1) = 169.900 Q1P5F = 10.950 P0 = 30.000 P = 4.0700 RN/L = 7.4000

SECTION 115RB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

ALPHA (5)	ALPHA (11)	PO	P	RN/L
5.740	159.900	0.1551	6.3800	30.050
				1.2100
				5.1000

SECTION 115RB

DEPENDENT VARIABLE CP

THEIA
0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

[illegible]

MSFC TWT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11080)

MACH (5) = 2.740 ALPHA (1) = 169.900

SECTION (1) SR8

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.0458	-.0568	-.0325	-.0232	999.9999						
.902	999.9999	-.0919	-.1004	-.0938	999.9999						
.923	-.0962	-.0822	-.0828	-.0229	.0312					-.0774	
.945	-.1174	-.1284	-.1132	-.0725	-.0781					-.1114	
.982	.1713		.1294		.2563						

MACH (6) = 3.480 ALPHA (1) = 169.900 Q(P5F) = 6.8600 PO = 60.000 P = .81000 RN/L = 7.0000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0187	-.0333	-.0446	-.0497	-.0446						
.050	-.0305	-.0378	-.0536	-.0599	-.0538						
.074	-.0260	-.0446	-.0593	-.0649	-.0661						
.098	-.0322	-.0508	-.0610	-.0683	-.0514						
.111	-.0108	-.0266	-.0215	-.0249	-.0384						
.139	999.9999	-.0108	-.0136	-.0198	.0252					-.0012	-.0345
.168	.0026	-.0148	-.0165	-.0198	.0325					.0054	-.0306
.191	-.0097	-.0085	-.0187	-.0254	.0320999.9999					.0072	-.0350
.255	-.0120	-.0091	-.0164	-.0119	.0303999.9999					-.0384	
.344	-.0068	-.0085	-.0204	.0049	999.9999						
.382			-.0192	-.0006	.0314999.9999					-.0238	
.657	999.9999	-.0193	-.0041		999.9999					-.0063	
.702	-.0147		-.0457	.0094	999.9999					-.0401	
.724	-.0554	-.0238	-.0525	-.0187	999.9999.9999					999.9999	
.744	.0520	-.0435	-.0672	-.0554	-.0520999.9999					-.0452	
.755	.0319	.0443	.0330	.0975	.1971999.9999					.0443	
.859	.0308999.9999	.0364	.0268	.0308	.0710999.9999					.0094	
.902	999.9999	-.0221	-.0018	.0375	999.9999						
.923	-.0458	-.0491	-.0508	-.0441	999.9999					-.0317	
.945	-.0683	-.0407	-.0294	.0144	.0545					-.0536	
.982	.2017	-.0706	-.0548	-.0232	-.0254						
			.1601		.2878						

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TABULATED SOURCE DATA, MSFC TWT 603 (SA208F)

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MSFC TWT 603 (SA208F) SRB - ALL PROTUBERANCES (R11081) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 90.000

MACH (1) = .600 ALPHA (1) = 179.900 O(P)SF = 7.5000 PO = 38.000 P = 29.800 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.1213	.1226	.1145	.1121	.1168
.050	.0921	.0843	.0808	.0808	.0758	.0793
.074	.0256	.0239	.0160	.0160	.0116	.0143
.098	.1381	.1437	.1444	.1444	.1544	.1049
.111	.3645	.4208	.4211	.4172	.4285	.4419
.139	.999.9999	.1164	.0978	.0935	.1009	.0951
.168	.0286	.1014	.0512	.0521	.0386	.0125
.191	.0259	.0235	.0378	.0358	.0548	.0590
.255	.0063	.0163	.0235	.0411	.0395	.0395
.344	.0404	.0096	.0163	.0266	.0332	.0395
.392	.0000	.0000	.0428	.0505	.0482	.0356
.657	.999.9999	.0650	.0798	.0516	.0290	.0356
.702	.0395	.0116	.0548	.0548	.0176	.0169
.724	.2003	.2261	.2018	.1922	.2078	.1981
.744	.2248	.2318	.2840	.2971	.2473	.1759
.755	.1671	.999.9999	.1932	.2016	.1615	.1019
.869	.1056	.0827	.1932	.2016	.1615	.1019
.902	.999.9999	.2466	.0190	.0190	.1015	.0356
.923	.3546	.3712	.2559	.2559	.2643	.0356
.945	.3867	.4045	.3656	.3656	.3766	.3439
.982	.7977	.4045	.5156	.5156	.4059	.3710
			.8025	.8025	.8031	.8031

MACH (2) = .901 ALPHA (1) = 179.900 O(P)SF = 7.5000 PO = 22.010 P = 13.000 RN/L = 6.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.1323	.1320	.1201	.1185	.1185
.050	.0915	.0836	.0836	.0761	.0738	.0777
.074	.0006	.0247	.0247	.0233	.0166	.0034
.098	.2144	.2534	.2534	.2452	.2275	.1622
.111	.3206	.3143	.3110	.3153	.3133	.3305
.139	.999.9999	.1175	.0874	.0856	.0844	.0891
.168	.0321	.0252	.0339	.0444	.0409	.0531
.191	.0261	.0166	.0279	.0340	.0339	.0348
.255	.0214	.0071	.0274	.0305	.0305	.0348
			.0274	.0305	.0305	.0348

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11081)

$$\text{MACH} (2) = .901 \quad \text{ALPHA} (1) = 179.900$$

SECTION () SRB DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 35.0000 57.5000 80.0000 102.5000 125.0000 147.5000 170.0000 192.5000 215.0000 237.5000 260.0000 282.5000 305.0000 327.5000 350.0000 372.5000 395.0000 417.5000 440.0000 462.5000 485.0000 507.5000 530.0000 552.5000 575.0000 597.5000 620.0000 642.5000 665.0000 687.5000 710.0000 732.5000 755.0000 777.5000 800.0000 822.5000 845.0000 867.5000 890.0000 912.5000 935.0000 957.5000 980.0000 1002.5000 1025.0000 1047.5000 1070.0000 1092.5000 1115.0000 1137.5000 1160.0000 1182.5000 1205.0000 1227.5000 1250.0000 1272.5000 1295.0000 1317.5000 1340.0000 1362.5000 1385.0000 1407.5000 1430.0000 1452.5000 1475.0000 1497.5000 1520.0000 1542.5000 1565.0000 1587.5000 1610.0000 1632.5000 1655.0000 1677.5000 1700.0000 1722.5000 1745.0000 1767.5000 1790.0000 1812.5000 1835.0000 1857.5000 1880.0000 1902.5000 1925.0000 1947.5000 1970.0000 1992.5000 2015.0000 2037.5000 2060.0000 2082.5000 2105.0000 2127.5000 2150.0000 2172.5000 2195.0000 2217.5000 2240.0000 2262.5000 2285.0000 2307.5000 2330.0000 2352.5000 2375.0000 2397.5000 2420.0000 2442.5000 2465.0000 2487.5000 2510.0000 2532.5000 2555.0000 2577.5000 2600.0000 2622.5000 2645.0000 2667.5000 2690.0000 2712.5000 2735.0000 2757.5000 2780.0000 2802.5000 2825.0000 2847.5000 2870.0000 2892.5000 2915.0000 2937.5000 2960.0000 2982.5000 3005.0000 3027.5000 3050.0000 3072.5000 3095.0000 3117.5000 3140.0000 3162.5000 3185.0000 3207.5000 3230.0000 3252.5000 3275.0000 3297.5000 3320.0000 3342.5000 3365.0000 3387.5000 3410.0000 3432.5000 3455.0000 3477.5000 3500.0000 3522.5000 3545.0000 3567.5000 3590.0000 3612.5000 3635.0000 3657.5000 3680.0000 3702.5000 3725.0000 3747.5000 3770.0000 3792.5000 3815.0000 3837.5000 3860.0000 3882.5000 3905.0000 3927.5000 3950.0000 3972.5000 3995.0000 4017.5000 4040.0000 4062.5000 4085.0000 4107.5000 4130.0000 4152.5000 4175.0000 4197.5000 4220.0000 4242.5000 4265.0000 4287.5000 4310.0000 4332.5000 4355.0000 4377.5000 4400.0000 4422.5000 4445.0000 4467.5000 4490.0000 4512.5000 4535.0000 4557.5000 4580.0000 4602.5000 4625.0000 4647.5000 4670.0000 4692.5000 4715.0000 4737.5000 4760.0000 4782.5000 4805.0000 4827.5000 4850.0000 4872.5000 4895.0000 4917.5000 4940.0000 4962.5000 4985.0000 5007.5000 5030.0000 5052.5000 5075.0000 5097.5000 5120.0000 5142.5000 5165.0000 5187.5000 5210.0000 5232.5000 5255.0000 5277.5000 5300.0000 5322.5000 5345.0000 5367.5000 5390.0000 5412.5000 5435.0000 5457.5000 5480.0000 5502.5000 5525.0000 5547.5000 5570.0000 5592.5000 5615.0000 5637.5000 5660.0000 5682.5000 5705.0000 5727.5000 5750.0000 5772.5000 5795.0000 5817.5000 5840.0000 5862.5000 5885.0000 5907.5000 5930.0000 5952.5000 5975.0000 5997.5000 6020.0000 6042.5000 6065.0000 6087.5000 6110.0000 6132.5000 6155.0000 6177.5000 6200.0000 6222.5000 6245.0000 6267.5000 6290.0000 6312.5000 6335.0000 6357.5000 6380.0000 6402.5000 6425.0000 6447.5000 6470.0000 6492.5000 6515.0000 6537.5000 6560.0000 6582.5000 6605.0000 6627.5000 6650.0000 6672.5000 6695.0000 6717.5000 6740.0000 6762.5000 6785.0000 6807.5000 6830.0000 6852.5000 6875.0000 6897.5000 6920.0000 6942.5000 6965.0000 6987.5000 7010.0000 7032.5000 7055.0000 7077.5000 7100.0000 7122.5000 7145.0000 7167.5000 7190.0000 7212.5000 7235.0000 7257.5000 7280.0000 7302.5000 7325.0000 7347.5000 7370.0000 7392.5000 7415.0000 7437.5000 7460.0000 7482.5000 7505.0000 7527.5000 7550.0000 7572.5000 7595.0000 7617.5000 7640.0000 7662.5000 7685.0000 7707.5000 7730.0000 7752.5000 7775.0000 7797.5000 7820.0000 7842.5000 7865.0000 7887.5000 7910.0000 7932.5000 7955.0000 7977.5000 8000.0000 8022.5000 8045.0000 8067.5000 8090.0000 8112.5000 8135.0000 8157.5000 8180.0000 8202.5000 8225.0000 8247.5000 8270.0000 8292.5000 8315.0000 8337.5000 8360.0000 8382.5000 8405.0000 8427.5000 8450.0000 8472.5000 8495.0000 8517.5000 8540.0000 8562.5000 8585.0000 8607.5000 8630.0000 8652.5000 8675.0000 8697.5000 8720.0000 8742.5000 8765.0000 8787.5000 8810.0000 8832.5000 8855.0000 8877.5000 8900.0000 8922.5000 8945.0000 8967.5000 8990.0000 9012.5000 9035.0000 9057.5000 9080.0000 9102.5000 9125.0000 9147.5000 9170.0000 9192.5000 9215.0000 92

[illegible]

MACH (3) =	1.199	ALPHA (1) =	179.980	O(PSE) =	9.1400	P0	=	22.000	P	=	9.0900	RN/L	=	6.9000
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SECTION () 15RB

DEPENDENT VARIABLE CP

0.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.027	.0157	.0001	-.0009	.0102	.0201	
	.050	-.0564	.0079	.0840	-.0654	-.0502	
	.074	.3186	-.1991	-.1978	.1831	-.1676	
	.098	-.4979	.5382	-.5585	-.5503	-.4301	
	.111	-.1023	-.1395	-.1446	-.1609	-.2527	-.3954
	.139	999.9999	.0624	.0176	.0356	-.0537	.0506
	.168	.1223	.0315	.0245	-.0283	-.0394	999.9999
	.191	-.0045	-.0124	-.0258	.0212	-.0442	999.9999
	.255	-.0129	-.0392	-.0592	-.0611	999.9999	999.9999
	.344	.0214	-.0312	-.1861	-.0783	-.0520	999.9999
	.392	999.9999	.1170	-.0490	.1068	999.9999	.0666
	.667	.0017	-.0302	-.0736	-.0318	999.9999	.1301
	.702	.2094	.2167	.1810	-.1971	-.0160	.0143
	.724	.3347	.3013	.3784	.3078	-.1867	999.9999
	.744	.744	.3013	.3621	.3078	.2833	999.9999
	.755	.2457	999.9999	.2693	.2368	.2065	999.9999
	.869	-.1786	-.1725	.1733	-.1775	999.9999	.2165
	.902	999.9999	.4171	.4244	-.4177	999.9999	
	.923	.4572	.4378	.4691	-.5059	-.4627	.4695
	.945	-.6779	-.5986	-.5986	-.6780	-.6429	.5793
	.982	-.2010	-.7477	-.2222		-.2020	

DATE 07 MAR 77

TABULATED SOURCE DATA. NSFC TWT 603 (5A28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (4) = 1.951 ALPHA (1) = 179.900 Q(PSF) = 11.030 PO = 30.010 P = 4.1400 RM/L = 7.4000

SECTION 11 SRB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.25.0000 225.0000 270.0000 315.0000

1X

0.27	0.320	0.246	0.207	0.179	0.176
0.050	-0.1248	-0.1122	-0.0751	-0.0479	-0.0434
0.074	-0.1628	-0.1704	-0.1593	-0.1269	-0.1138
0.098	-0.1768	-0.2038	-0.1892	-0.1827	-0.1418
0.111	0.256	0.0105	0.0014	-0.0118	-0.0405
0.139	999.99999	0.0337	0.0271	0.0284	0.0221
0.168	1.053	0.0313	0.0225	0.0137	0.123999.9999
0.191	0.0621	0.0232	0.0144	0.0109	0.0085999.9999
0.255	0.270	0.0197	0.0249	0.0057	999.9999
0.344	0.471	0.0004	-0.0055	0.0123	0.323999.9999
0.392	999.9999	-0.0244	0.0091	-0.0073	999.9999
0.667	0.0595	-0.0613	-0.0448	-0.0524	999.9999
0.702	-0.1882	-0.1880	-0.2077	-0.1896	-0.199999.9999
0.724	0.2931	0.2111	0.2392	0.2314	-0.1933999.9999
0.744	0.2931	0.2111	0.2392	0.2314	-0.1933999.9999
0.755	1.983999.9999	0.2055	0.2019	0.1792	0.1529999.9999
0.869	0.0601	-0.0703	-0.0638	-0.0657	999.9999
0.902	999.9999	-0.1878	-0.1848	-0.1944	999.9999
0.923	-0.1508	-0.1672	-0.1525	-0.1816	-0.1550
0.945	-0.2787	-0.2764	-0.2626	-0.2795	-0.2862
0.982	0.0786	-0.0772	0.0772	-0.2795	-0.0909

MACH (5) =	2.740	ALPHA (1) =	179.900	Q(PSF) =	6.3700	P0	=	30.030	P	=	1.2100	RN/L	=	5.1000
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SECTION 115RB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

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0.27	-.0193	-.0125	-.0100	-.0088	-.0082
0.50	-.0374	-.0360	-.0361	-.0439	-.0439
0.74	-.0605	-.0798	-.0792	-.0744	-.0724
0.98	-.0683	-.0950	-.0956	-.0901	-.0719
1.11	-.0027	-.0069	-.0078	-.0143	-.0629
1.39	.999	.0281	.0012	.0050	.0063
1.68	.0384	.0166	.0056	.0087	.005999
1.91	.0154	.0087	.0044	.0014	.0032999
2.55	.0154	.0190	-.0003	.0014	.999
3.44	-.0197	-.0155	-.0009	-.0035	.0081999
3.92	.999	.999	-.0002	.999	.999
6.67	.999	-.0155	-.0125	-.0106	.999
7.02	-.0210	-.0344	-.0197	-.0240	.0096999
7.24	-.0913	-.0901	-.0920	-.0907	-.0944999
7.44	.1792	.1400	.1810	.1501	.1279999
7.55	.1052	.999	.1309	.1052	.0791999

DATE 07 MAR 77

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MSFC TWT 603 (SA28F) SRB - ALL PROTRUDANCES

MACH (5) = 2.740 ALPHA (1) = 179.900

08511, NO11335

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

7/1X

.869	-.0040
.902	999.9999
.923	-.0665
.945	-.1241
.982	.1877

-	.0100	-	.0094
-	.0956	-	.0919
-	.0768	-	.0640
-	.1169	-	.1095
			.1822

- . 0137	999.9999
- . 0938	999.9999
- . 0828	- . 0659
- . 1174	- . 1144
	.1904

999.9999
999.9999
-.0659
-.1144
-.1904
-.0689
-.1047

[illegible]

SECTION 11.0135

DEPENDENT VARIABLE CP

THETA
.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

7/1X

0.27	- .0045	
0.50	- .0221	
0.74	- .0209	
0.98	- .0255	
1.11	0.128	- .0010
1.39	999.9999	0.184
1.68	0.268	0.139
1.91	0.122	0.117
2.55	0.082	
3.44	- .0001	- .0029
3.92	999.9999	
6.67	- .0052	- .0102
7.02	- .0486	- .0446
7.24	1.374	1.142
7.44	0.759999	0.9999
7.55	0.184	
8.69	999.9999	
9.02	- .0227	
9.23	- .0610	
9.45	- .2230	
9.82		

-.0113	-.0153	
-.0289	-.0345	
-.0401	-.0452	
-.0491	-.0542	
-.0077	.0083	-.0046
.0173	.0065	.0060
-.0134	.0071	.0032
	.0072	.0065
	.0072	
.0088	.0009	
	-.0051	.0089
	-.0015	
-.0063	-.0029	
	-.0055	-.0086
	-.0418	-.0486
	.1441	.1250
	.1029	.1092
		.0139
.0144		-.0480
-.0491		-.0221
-.0322		-.0520
-.0559		.2175

0.120	-	0.086
0.311	-	0.268
0.046	-	0.413
0.514	-	0.424
0.080	-	0.351
0.054	0.074	0.049
0.049	0.071	0.0099
	0.072999	0.9999
0.032	0.99	0.9999
	0.116999	0.9999
	0.99	0.9999
-0.007	0.99	0.9999
	0.050999	0.9999
	0.0437999	0.9999
	0.1035999	0.9999
	0.0590999	0.9999
0.116	0.99	0.9999
-0.480	0.99	0.9999
-0.351	0.421	0.021
-0.0570	-	0.0536
		0.2252

[illegible]

0.0080	- .0052
0.0043	0.0026
0.0037	0.0032
	0.0015
	- .0012
	- .0001
	- .0046
	0.0020
999	9959
	.1210
	.0612
	- .0238
	- .0475

TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11082) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

MACH (1) = .597 ALPHA (1) = 70.000 Q(PSF) = 3.5300 PO = 18.000 P = 14.150 RN/L = 4.1000

PARAMETRIC DATA

RN-SCM = 1.000 PHI = 315.000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.10780	-.1.9271	-.1.8534	-.2920	1.0247
.050	-.7390	-.1.6009	-.1.4713	-.2223	1.0765	
.074	-.6891	-.1.2920	-.1.1595	-.1660	1.1072	
.098	-.6539	-.1.0402	-.9606	-.0708	1.1316	
.111	-.1.3348	-.1.2278	-.8969	-.0399	1.1257	-.9332
.139	-.7546	-.8137	-.7340	-.1436	.8152	-.9512
.168	-.6308	-.7133	-.9999	-.1714	.7407	-.7655
.191	-.5984	-.6373	-.7660	-.1.0240	.7213	-.7032
.255	-.4550	999.9999	-.5321	-.1208	.7084	-.9365
.344	-.3673	-.3646	-.4058	-.5905	1.0366	-.1.0907
.392	999.9999	999.9999	-.5017	-.6962	1.0155	-.7471
.507	999.9999	999.9999	-.8109	-.2667	1.0088	-.7639
.702	-.5484	-.5851	-.8662	-.1.0233	.9968	-.9965
.724	-.3983	-.4973	-.5879	-.1.0169	1.0077	999.9999
.744	-.5183	-.5331	-.7645	-.1.2425	.7117	-.1.0552
.755	-.4906	999.9999	-.7856	-.1.2459	.7695	-.1.3287
.869	-.5157	999.9999	-.7925	-.2248	.6438	1.0006
.902	999.9999	999.9999	-.7134	-.2202	1.0059	1.0859
.923	-.4041	-.4790	-.7700	-.0969	1.1112	-.8477
.945	-.3646	-.5085	-.7528	.0324	1.0276	-.6249
.982	-.3419		-.8352		.5112	

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TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

PAGE 226

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11083) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 315.000

MACH (1) = .502 ALPHA (1) = 70.000 O(PSF) = 7.9500 PO = 38.030 P = 29.760 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-1.1355	-1.8018	-1.7846	-2.967	1.0125
.050	-1.4707	-1.4725	-1.4700	-2416	1.0596
.074	-1.6889	-1.1286	-1.2568	-1.936	1.0887
.098	-1.8216	-1.8216	-1.5796	-1.158	1.1116
.111	-1.0225	-1.0225	-1.7700	-1.1907	1.0892
.139	-1.6387	-1.6387	-1.8137	-1.3987	1.0481
.168	-1.5711	-1.5711	-1.1310	-1.4480	1.0217
.191	-1.5433	-1.5433	-1.2292	-1.4428	1.0091
.255	-1.4663	999.9999	-1.3438	-3147	1.0052
.344	-1.4377	-1.4905	-1.8143	-1.2693	1.0052
.392	999.9999	999.9999	-1.5408	-3915	1.0052
.667	999.9999	999.9999	-1.3909	-3915	1.0052
.702	-1.4394	-1.5198	-1.1689	-1.4942	1.0052
.724	-1.3846	-1.4282	-1.0973	-1.1983	1.0052
.744	-1.3004	-1.3449	-1.0917	-1.3393	1.0052
.755	-1.4496	999.9999	-1.4867	-1.3869	1.0052
.869	-1.4847	999.9999	-1.3884	-3409	1.0052
.902	999.9999	999.9999	-1.2362	-3313	1.0052
.923	-1.4146	-1.4560	-1.2362	-1480	1.0052
.945	-1.3995	-1.4431	-1.5234	0355	1.0052
.982	-1.3543	-1.6818	-1.6818	0355	1.0052

MACH (2) = .902

ALPHA (1) = 70.000 O(PSF) = 7.4000

PO = 22.010

P = 12.980

RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-1.7807	-1.7807	-1.7824	2392	1.1395
.050	-1.7844	-1.7844	-1.7841	2702	1.1868
.074	-1.7861	-1.7861	-1.7533	2081	1.2159
.098	-1.7824	-1.7824	-1.7680	3298	1.2356
.111	-1.7897	-1.7897	-1.7604	3439	1.2292
.139	-1.7336	-1.7336	-1.7342	2590	1.1888
.168	-1.6921	-1.6921	-1.7135	2223	1.1546
.191	-1.6781	-1.6781	-1.7417	1818	1.1544
.255	-1.6336	999.9999	-1.6348	1818	1.1328

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TABULATED SOURCE DATA. MSFC TWT 603 (5A28F)

(R11083)

MACH (2) = .902 ALPHA (1) = 70.000

MSFC TWT 60% (SA28F) SRB - ALL PROTRUDANCES

SECTION 11.335
BAS 11.1

DEPENDENT VARIABLE CP

1451A 0000 22 5000 45.0000 67.5000 90.0000 12.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-.5307	-.5329	-.5356	-.5545	-.6194	.8487	1.1179	-.5248
.394							1.1130	-.4873
.392				-.4588			1.0783	-.5355
.667	999.9999	999.9999		-.5801		.1350	1.0901	-.5436
.702	-.4997	-.5125	-.5525	-.5916	-.6458	.8133	1.0800	999.9999
.724	-.4971	-.5111	-.5734	-.5761	-.5713	.8980	1.1895	-.5585
.744	-.4586	-.4571	-.5051	-.6882	-.7065	.9233	1.0537	-.5213
.755	-.4602999	999.9999	-.4490	-.4566	-.6485	.8179	1.1192	
.869	-.3935	999.9999		-.4697		.1229	1.0831	
.902	999.9999	999.9999	-.5166	-.4697			1.1875	
.923	-.3532	-.3797	-.4744	-.4744		.1850	1.1990	-.4455
.945	-.3563	-.4080	-.4694	-.4694		.2246	1.1085	-.5342
.982			-.6288	-.6288			.2246	

Wavelength (nm)	Albedo (%)	ρ_0	p	RN/L
400	104	70 000	22.020	9.1500
500	104	70 000	22.020	9.1500
600	104	70 000	22.020	9.1500
700	104	70 000	22.020	9.1500
800	104	70 000	22.020	9.1500
900	104	70 000	22.020	9.1500
1000	104	70 000	22.020	9.1500
1100	104	70 000	22.020	9.1500
1200	104	70 000	22.020	9.1500
1300	104	70 000	22.020	9.1500
1400	104	70 000	22.020	9.1500
1500	104	70 000	22.020	9.1500
1600	104	70 000	22.020	9.1500
1700	104	70 000	22.020	9.1500
1800	104	70 000	22.020	9.1500
1900	104	70 000	22.020	9.1500
2000	104	70 000	22.020	9.1500
2100	104	70 000	22.020	9.1500
2200	104	70 000	22.020	9.1500
2300	104	70 000	22.020	9.1500
2400	104	70 000	22.020	9.1500
2500	104	70 000	22.020	9.1500
2600	104	70 000	22.020	9.1500
2700	104	70 000	22.020	9.1500
2800	104	70 000	22.020	9.1500
2900	104	70 000	22.020	9.1500
3000	104	70 000	22.020	9.1500
3100	104	70 000	22.020	9.1500
3200	104	70 000	22.020	9.1500
3300	104	70 000	22.020	9.1500
3400	104	70 000	22.020	9.1500
3500	104	70 000	22.020	9.1500
3600	104	70 000	22.020	9.1500
3700	104	70 000	22.020	9.1500
3800	104	70 000	22.020	9.1500
3900	104	70 000	22.020	9.1500
4000	104	70 000	22.020	9.1500
4100	104	70 000	22.020	9.1500
4200	104	70 000	22.020	9.1500
4300	104	70 000	22.020	9.1500
4400	104	70 000	22.020	9.1500
4500	104	70 000	22.020	9.1500
4600	104	70 000	22.020	9.1500
4700	104	70 000	22.020	9.1500
4800	104	70 000	22.020	9.1500
4900	104	70 000	22.020	9.1500
5000	104	70 000	22.020	9.1500
5100	104	70 000	22.020	9.1500
5200	104	70 000	22.020	9.1500
5300	104	70 000	22.020	9.1500
5400	104	70 000	22.020	9.1500
5500	104	70 000	22.020	9.1500
5600	104	70 000	22.020	9.1500
5700	104	70 000	22.020	9.1500
5800	104	70 000	22.020	9.1500
5900	104	70 000	22.020	9.1500
6000	104	70 000	22.020	9.1500
6100	104	70 000	22.020	9.1500
6200	104	70 000	22.020	9.1500
6300	104	70 000	22.020	9.1500
6400	104	70 000	22.020	9.1500
6500	104	70 000	22.020	9.1500
6600	104	70 000	22.020	9.1500
6700	104	70 000	22.020	9.1500
6800	104	70 000	22.020	9.1500

SECTION 115RB

DEPENDENT VARIABLE CP

THETA	0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	247.5000	270.0000	292.5000	315.0000
THETA	0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	247.5000	270.0000	292.5000	315.0000

[illegible]

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11083)

MACH (4) = 1.969 ALPHA (1) = 70.000 Q(PSF) = 10.920 PO = 30.010 P = 4.0200 RN/L = 7.6000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.2925	-.3138	-.0974	.9212	1.6157
.050	-.2917	-.3000	-.0802	.9155	1.6266
.074	-.2805	-.2862	-.0871	.9127	1.6648
.098	-.2846	-.2799	-.0888	.8980	1.6474
.111	-.2848	-.2795	-.0940	.8466	1.5701
.139	-.2695	-.2672	-.1279	.7855	1.5282
.168	-.2590	-.2557	-.1414	.7618	1.4875
.191	-.2516	-.2479	-.1446	.7539	1.4656
.255	-.2336	-.2142	-.1391	.7539	1.4612
.344	-.2102	-.2136	-.1365	.7607	1.4472
.392	999.9999	999.9999	-.1279	1.4424	1.4285
.667	999.9999	999.9999	-.1238	1.4698	1.1151
.702	-.2541	-.2540	-.1233	1.2788	1.4939
.724	-.2620	-.2548	-.0763	1.4592	1.6978
.744	-.2602	-.2586	-.0727	.9325	1.1142
.755	-.2599	999.9999	-.1313	1.3548	1.5354
.869	-.2484	999.9999	-.1136	.8029	1.5022
.902	999.9999	999.9999	-.0619	.8969	1.6824
.923	-.2536	-.2424	-.0868	.9029	1.6972
.945	-.2562	-.2539	-.0923	.8299	1.5401
.982	-.2458		-.2490	.6102	

MACH (5) = 2.740 ALPHA (1) = 70.000 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RN/L = 5.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0881	-.1052	.0422	1.0289	1.7621
.050	-.0973	-.1100	.0532	1.0054	1.7603
.074	-.0827	-.1131	.0435	.9743	1.7609
.098	-.0931	-.1102	.0368	.9574	1.7524
.111	-.1009	-.1125	-.1089	.9046	1.6692
.139	-.0997	-.1016	-.1044	.8591	1.6329
.168	-.1016	-.0973	-.1022	.8350	1.5957
.191	-.0998	-.0906	-.0973	.8384	1.5872
.255	-.1004	999.9999	-.0068	.8384	1.5759
.344	-.0967	-.0858	.0008	1.3485	1.5575
.392	999.9999	999.9999	.0022	1.5515	.0061
.667	999.9999	999.9999	.0095	1.5477	.0210
.702	-.1149	-.0991	.0143	1.3766	.0344
.724	-.1149	-.1186	-.0924	1.6230	1.8787
.744	-.1271	-.1271	-.1295	.8232	1.0303
.755	-.1272	999.9999	-.0093	1.4761	1.4894

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TABULATED SOURCE DATA. MSFC TWT 603 (5A28F)

MSFC TWT 603 (5A28F) SRB - ALL PROTUBERANCES (R11083)

MACH (5) = 2.740 ALPHA (1) = 70.000

SECTION () SRB

DEPENDENT VARIABLE CP

THEIA
0.0000 22.5000 45.0000 67.5000 90.0000 12.5000 35.0000 57.5000 80.0000 225.0000 270.0000 315.0000

7/X

.859	- .1210	999.9999	.0291	.9168	1.5531
.902	999.9999	999.9999	.1090	1.0698	1.8909
.923	- .1187	- .1027	.0459	1.0495	1.9212
.945	- .1192	- .1186	.0447	.9541	1.7437
.982	- .0998		-.0876		.7801

MACH (6) = 3.480 ALPHA (1) = 70.000 Q(PSF) = 6.8600 PO = 59.990 P = .81000 RN/L = 7.0000

SECTION : 11SRB

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.25.0000 225.0000 270.0000 315.0000

71X

027	- .0268	- .0440	.0872	1.0454	1.7928	
050	- .0365	- .0469	.0950	1.0229	1.8052	
074	- .0308	- .0503	.0888	.9969	1.8075	
098	- .0337	- .0514	.0759	.9710	1.7945	
111	- .0410	- .0503	.0574	.9050	1.6953	.9542
139	- .0424	- .0520	.0380	.8622	1.4111	.9999
168	- .0447	- .0390999	.0464	.8425	1.3870	.9592
191	- .0333	- .0424	.0319	.3257	1.3803	.6181
255	- .0452	.999	.0403	.8522	1.6130	.6130
344	- .0475	- .0314	.0482	.3454	1.3772	.6021
392			.0522		1.5938	.0522
667	.999	.999	.0550	.8560	1.5955	.0652
702	- .0565	- .0415	.7669	.3825	1.6632	.0815
724	- .0582	- .0644	.1266	.5420	1.7116	.999
744	- .0706	- .0706	- .0165	.1841	1.7872	.9749
755	- .0706999	.9999	.0245	.3470	1.4709	1.4253
869	- .0638	.999	.0708	.9157	1.6676	.6676
902	.999	.9999	.1649	1.1389	1.9748	.9748
923	- .0621	- .0463	.0731	1.0432	1.9079	.9079
945	- .0610	- .0616	.0939	.9435	1.7319	.7319
982	- .0469		- .0368		1.7252	.7252

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11084) (22 AUG 75)

REFERENCE DATA

SREF	=	116.2600	50. FT.	XMRP	=	104.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

RM-SCH	=	2.000	PHI	=	315.000
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PARAMETRIC DATA

MACH () =	.898	ALPHA () =	70.000	O(PSF) =	7.3500	PO	=	22.000	P	=	13.040	RN/L	=	6.3000
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SECTION NO 11335

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

7/x

027	-7685	-7611	-7617	.2337	1.1386
050	-7690	-7680	-7654	.2627	1.1855
074	-7746	-7688	-7533	.2827	1.2153
098	-7670	-7645	-7712	.3243	1.2352
111	-7611	-7618	-7759	.3382	1.2243
139	-7733	-7225	-7332	.4578	.9820
168	-5953	-6877999.9999	-7178	.5707	.9198
191	-5761	-6809	-7563	.6108	.8985
255	-6339	999.9999	-7408	.6190	.8840
344	-5251	-5348	-6327	.1716	1.1502
392	999.9999	999.9999	-5533	.6227	1.1321
667	999.9999	999.9999	-5775	.1289	1.1118
702	-4987	-5160	-5959	.6537	1.0771
724	-4972	-5115	-5816	.8952	1.0773
744	-4606	-4593	-6987	.7176	1.0890
755	-4569999.9999	-4504	-4606	.6523	1.1889
869	-3973	999.9999	-4664	.1182	1.0407
902	999.9999	999.9999	-5238	.1851	1.1184
923	-3526	-3795	-4763	.1786	1.0818
945	-3564	-4110	-4829	.2191	1.1851
982	-3153		-6483		1.1954
					1.1066
					.2246
					-4440
					-5246
					-5449
					999.9399
					-5646
					-5224
					-7484
					-9366
					-6917
					-6674
					-5273
					-4908
					-5428
					999.9399
					-5646
					-5224
					-7484
					-9366
					-6917
					-6674
					-5273
					-4908
					-5428
					999.9399
					-5646
					-5224
					-7484
					-9366
					-6917
					-6674
					-5273
					-4908
					-5428
					999.9399
					-5646
					-5224
					-7484
					-9366
					-6917
					-6674
					-5273
					-4908
					-5428
					999.9399
					-5646
					-5224
					-7484
					-9366
					-6917
					-6674
					-5273
					-4908
					-5428
					999.9399
					-5646
					-5224
					-7484
					-9366
					-6917
					-6674
					-5273
					-4908
					-5428
					999.9399
					-5646
					-5224
					-7484
					-9366
					-6917
					-6674
					-5273
					-4908
					-5428
					999.9399
					-5646
					-5224
					-7484
					-9366
					-6917

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTRUDANCES

(R11085) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 RREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = 315.000

MACH (1) = .601 ALPHA (1) = 90.000 OIPSF = 3.5600 PO = 18.000 P = 14.110 RN/L = 4.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.027	-.5026	-.5730	-.5598	-.3690	.7108
.050	-.5801	-.5834	-.5708	-.3383	.7928
.074	-.5882	-.6131	-.6065	-.3308	.8604
.098	-.6068	-.6528	-.9563	-.2379	.9296
.111	-.6209	-.6781	-.8464	-.1611	1.0039
.139	-.6030	-.6398	-.6992	-.2089	1.1170
.168	-.6145	-.6198	-.6152	-.2187	1.1286
.191	-.6008	-.5899	-.7276	-.2187	1.1314
.255	-.4995	999.9999	-.6370	-.1395	1.1356
.344	-.5497	-.5533	-.8214	-.9390	1.1387
.392	999.9999	999.9999	-.1056	-.1887	1.1419
.467	999.9999	999.9999	-.8287	-.1887	1.1405
.502	-.5517	-.5756	-.8251	-.1087	1.1386
.524	-.5446	-.5486	-.7468	-.1153	1.1398
.544	-.5526	-.5624	-.5865	-.1075	1.1408
.559	-.5643	999.9999	-.5150	-.7534	1.1358
.569	-.6079	999.9999	-.1238	-.2745	1.1375
.602	999.9999	999.9999	-.9793	-.3368	1.1397
.623	-.6121	-.6978	-.8039	-.1629	1.1362
.645	-.6149	-.7010	-.9244	.0594	1.1345
.682	-.8670		-.8706		1.0875

(R:1086) (22 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF	=	116.2600	SO. FT.	XREF	=	104.0000	IN.
LREF	=	146.0000	IN.	YREF	=	.0000	IN.
BREF	=	146.0000	IN.	ZREF	=	.0000	IN.
SCALE	=	.0055					

FN-SCH -	2.000	PMI -	315.000
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MACH (1) =	.602	ALPHA (1) =	90.000	O(PSF) =	7.5400	P0	=	30.020	P	=	29.770	RM/L	=	0.8000
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SECTION 115RB

DEPENDENT VARIABLE CP

141A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

0.27	7621	9782	7954	5472	6771
0.50	6943	6944	6389	4504	7624
0.74	6773	7242	7111	4239	8296
0.98	7246	7602	6395	3263	9074
1.11	7352	7498	8607	13451	6374
1.39	7189	7157	10573	1426	6985
1.68	6932	671999.9999	7044	4316	108375
1.91	6301	6370	5361	10768	1094
2.55	6741	999.9999	12982	2867	11042
3.44	6055	6550	11117	7199	11058
3.92	999.9999	999.9999	8382	3288	11095
6.67	6597	6051	8764	7010	11078
7.02	6573	6431	7676	14499	11122
7.24	6573	6463	7336	1454	1077
7.44	6533	6463	7042	3845	11056
7.55	582199.9999	999.9999	8495	15093	11066
8.69	6925	999.9999	12059	3948	11070
9.02	999.9999	999.9999	4534	1052	11052
9.23	7191	7681	8969	4317	11030
9.45	7489	8018	10790	2401	11055
9.62	9392	9392	11535	0106	10514

MACH (2) =	.903	ALPHA (1) =	90.000	O(PSF) =	7.4100	PO	=	22.020	P	=	12.980	RN/L	=	6.3000
------------	------	-------------	--------	----------	--------	----	---	--------	---	---	--------	------	---	--------

SECTION : 11SRB

DEPENDENT VARIABLE CP

TIME	0.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	247.5000	270.0000	292.5000	315.0000
TIME	0.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	247.5000	270.0000	292.5000	315.0000

X/L	0.27	- .5693	- .5734	- .5700	- .0763	.7832
	.050	- .5781	- .5788	- .5721	- .0169	.8720
	.074	- .5882	- .5822	- .5808	- .0374	.9425
	.098	- .6098	- .6072	- .6133	.1402	1.0202
	.111	- .6315	- .6241	- .6158	.2025	1.0859
	.139	- .6523	- .6483	- .6366	.2846	1.1657
	.168	- .6660	- .662999	- .6490	.2882	1.2232
	.191	- .6565	- .6660	- .6335	- .6017	1.2301
	.255	- .6194	999.9999	- .5660	.2332	1.2358

DATE 07 MAR 77

TABULATED SOURCE DATA, NSFC TW7 603 (SA28F)

(R11086)

MSFC TWT 603 (SA29F) SRB - ALL PROTUBERANCES

MACH (2) = .903 ALPHA (1) = 90.000

SECTION 11588

DEPENDENT VARIABLE CP

THETA
 .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	344	- .3403	- .3471	- .3484	- .5558	- .6044	.9643	1.2392	- .3477
	392				- .6443			1.2402	- .6430
	667	999.9999			- .5532	.2334		1.2398	- .5140
	702	- .5173	- .3228	- .5430	- .5505	- .6139	.9521	1.2381	- .4985
	724	- .5004	- .5091	- .5282	- .5835	- .6166	.9465	1.2381	999.9999
	744		- .5430	- .6944	- .7902	- .6631	.9384	1.2375	- .7516
	755	- .5430999.9999		- .7077	- .6674	- .6355	.9326	1.2379	- .7025
	869	- .5693	999.9999		- .5903		.2023	1.2326	
	902	999.9999			- .6098		.1393	1.2393	
	923	- .5727	- .5747		- .8908		.2251	1.2385	- .9510
	945	- .5747	.6214		- .8393		.3420	1.2351	- .8592
	982	- .5329			- .7231			1.1760	

[illegible]

SECTION 11588 DEPENDENT VARIABLE CP

0000 22 5000 45 0000 67 5000 90 0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

[illegible]

MSFC TWT 603 (SA28F) SRB - ALL PROTOUSURANCES (R11086)

MACH (4) = 1.954 ALPHA (1) = 90.000 O(PSF) = 11.010 PO = 30.010 P = 4.1200 RW/L = 7.6000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.2544	-.2550	-.1839	.6549	1.3022						
.050	-.2556	-.2558	-.1624	.6966	1.3683						
.074	-.2569	-.2551	-.1512	.7160	1.4247						
.098	-.2560	-.2540	-.1247	.7828	1.4871						
.111	-.2504	-.2536	-.1010	.8281	1.5546	.7858					
.139	-.2519	-.2513	-.1322	.8489	1.6394	.9999					
.168	-.2502	-.2506	-.1306	.8554	1.6452	.8599					
.191	-.2477	-.2490	-.1309	.8651	1.6479						
.255	-.2387	999.9999	-.1177	.8744	1.6504						
.344	-.2496	-.2507	-.2550	.8706	1.6302						
.392	999.9999	999.9999	-.1016		1.6345						
.667	999.9999	999.9999	-.1153		1.6475						
.702	-.2480	-.2506	-.2507	.2733	1.6546						
.724	-.2489	-.2486	-.2530	.2764	1.6713						
.744	-.2526	-.2493	-.2574	.2639	1.6554						
.755	-.2536	999.9999	-.2585	.2697	1.6406						
.869	-.2519	999.9999	-.1387	.8355	1.6369						
.902	999.9999	999.9999	-.1310	.7757	1.6469						
.923	-.2596	-.2496	-.1321	.8045	1.6440						
.945	-.2592	-.2579	-.2067	.8588	1.6482						
.982	-.1614		-.1272		1.6051						

MACH (5) = 2.740 ALPHA (1) = 90.000 O(PSF) = 6.3700 PO = 30.030 P = 1.2100 RW/L = 5.1000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0725	-.0891	-.0238	.7910	1.5046						
.050	-.0825	-.0962	-.0128	.8093	1.5502						
.074	-.0731	-.0953	-.0093	.8141	1.5824						
.098	-.0831	-.0992	-.0101	.8670	1.6230						
.111	-.0897	-.1028	-.0160	.9070	1.6777	.8794					
.139	-.0919	-.1010	-.0038	.9344	1.5103	.7656	.9999				
.168	-.0953	-.0895	-.0041	.9435	1.5232	.7821	.9426				
.191	-.0956	-.0854	-.0093	.9574	1.5198	.7579					
.255	-.0979	999.9999	-.0195	.9574	1.7560						
.344	-.1009	-.0849	-.0238	.3728	1.5250						
.392	999.9999	999.9999	-.0265		1.7518						
.667	999.9999	999.9999	-.0218	.9489	1.7573						
.702	-.1125	-.0950	-.0228	.3708	1.5141	.7948					
.724	-.1113	-.1113	-.0562	.3617	1.5107	.7573					
.744	-.1137	-.1113	-.0003	.3672	1.5064	.7548					
.755	-.1143	999.9999	-.0125	.3586	1.5052	.7542					

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 235

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11086)

MACH (5) = 2.740 ALPHA (1) = 90.000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1125	999.9999	.0064	.9247	1.7575
.902	999.9999	999.9999	-.0038	.8657	1.7593
.923	-.1180	-.1046	.0307	.8856	.0210
.945	-.1168	-.1162	-.0395	.9346	.1588
.982	-.0081		.0252		1.7700

MACH (6) = 3.480 ALPHA (1) = 90.000 Q(PSF) = 6.8700 PO = 60.050 P = .81000 RN/L = 6.9000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0182	-.0345	.0222	.7790	1.5018
.050	-.0289	-.0385	.0290	.7919	1.5441
.074	-.0198	-.0353	.0319	.8002	1.5851
.098	-.0278	-.0419	.0476	.8516	1.6280
.111	-.0328	-.0475	.0567	.8966	1.6921
.139	-.0368	-.0497	.0425	.9390	1.7940999.9999
.168	-.0397	-.046999.9999	.0447	.9564	1.8007.9639
.191	-.0413	-.0425	.0521	.9772	1.8468
.255	-.0436	999.9999	.0549	.9750	1.7982
.344	-.0470	-.0390	.0649	.9750	1.7920
.392			.0706	.9750	1.8005
.667	999.9999	999.9999	.0712	.9682	1.8063
.702	-.0388	-.0407	.0684		1.8044
.724	-.0588	-.0509	.0646		1.8123
.744	-.0616	-.0588	.0566		1.8100
.755	-.0610999.9999	-.0695	.0403		1.8042
.869	-.0576	999.9999	.0583		1.8055
.902	999.9999	999.9999	.0567		1.7945
.923	-.0616	999.9999	.0448		1.8036
.945	-.0610	-.0486	.0757		1.8688
.982	-.0296	-.0593	.0155		1.8019
			.0420		1.7799
			.9457		.0578
			.8888		.1783
			.9049		
			.9487		

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (5A28F)

PAGE 235

MSFC TWT 603 (5A28F) SRB - ALL PROTUBERANCES (R11087) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = 315.000

MACH () = .601 ALPHA () = 110.000 Q(PSF) = 3.5700 PO = 16.010 P = 14.110 RN/L = 4.1000

SECTION () SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.5481	-.4576	-.4172	-.4348	.3137
.050	-.5477	-.5082	-.5232	-.5286	.3345
.074	-.4289	-.5151	-.8235	-.5985	.3981
.098	-.3633	-.4086	-.9796	-.5234	.4527
.111	-.3515	-.3707	-.5767	-.5051	.4712
.139	-.3615	-.3864	-.4436	-.5272	.6514
.168	-.3976	-.4201	-.4381	-.5957	.9198
.191	-.4198	-.4395	-.4397	-.6150	.9357
.255	-.4731	999.9999	-.5935	-.1875	.9642
.344	-.5973	-.5744	-.6253	-.6499	.9851
.392	999.9999	999.9999	-.7320	-.2094	.9898
.667	999.9999	999.9999	-.4911	-.2094	1.0039
.702	-.5204	-.5297	-.7250	.6555	1.0217
.724	-.4801	-.5105	-.7284	.5267	.8407
.744	-.5286	-.5341	-.5849	.6846	1.0676
.755	-.5005	999.9999	-.5593	.6623	.0349
.868	-.6524	999.9999	-.7958	-.3088	1.0274
.902	999.9999	999.9999	-.1316	-.2862	1.1172
.923	-.7132	-.6717	-.7446	-.0842	.9935
.945	-.6917	-.7256	-.7120	.1433	.9996
.982	-.5806		-.13514		1.0941

-.5430 - .6687 - .3626
 -.4196 - .3764
 -.4476 - .4070
 -.4320
 -.6278
 -.8686
 -.4837
 -.5960
 999.9999
 -.6292
 -.6249
 -1.1012
 -.3635

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

DATE 07 MAR 77

(R11088) (22 AUG 75)

MSEC INT 603 (5A28F) SR8 - ALL PROTUBERANCES

PARAMETRIC DATA

PN-SCH	2.000	PHI	315.000
1	1.000	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000
4	1.000	1.000	1.000
5	1.000	1.000	1.000
6	1.000	1.000	1.000
7	1.000	1.000	1.000
8	1.000	1.000	1.000
9	1.000	1.000	1.000
10	1.000	1.000	1.000
11	1.000	1.000	1.000
12	1.000	1.000	1.000
13	1.000	1.000	1.000
14	1.000	1.000	1.000
15	1.000	1.000	1.000
16	1.000	1.000	1.000
17	1.000	1.000	1.000
18	1.000	1.000	1.000
19	1.000	1.000	1.000
20	1.000	1.000	1.000
21	1.000	1.000	1.000
22	1.000	1.000	1.000
23	1.000	1.000	1.000
24	1.000	1.000	1.000
25	1.000	1.000	1.000
26	1.000	1.000	1.000
27	1.000	1.000	1.000
28	1.000	1.000	1.000
29	1.000	1.000	1.000
30	1.000	1.000	1.000
31	1.000	1.000	1.000
32	1.000	1.000	1.000
33	1.000	1.000	1.000
34	1.000	1.000	1.000
35	1.000	1.000	1.000
36	1.000	1.000	1.000
37	1.000	1.000	1.000
38	1.000	1.000	1.000
39	1.000	1.000	1.000
40	1.000	1.000	1.000
41	1.000	1.000	1.000
42	1.000	1.000	1.000
43	1.000	1.000	1.000
44	1.000	1.000	1.000
45	1.000	1.000	1.000
46	1.000	1.000	1.000
47	1.000	1.000	1.000
48	1.000	1.000	1.000
49	1.000	1.000	1.000
50	1.000	1.000	1.000
51	1.000	1.000	1.000
52	1.000	1.000	1.000
53	1.000	1.000	1.000
54	1.000	1.000	1.000
55	1.000	1.000	1.000
56	1.000	1.000	1.000
57	1.000	1.000	1.000
58	1.000	1.000	1.000
59	1.000	1.000	1.000
60	1.000	1.000	1.000
61	1.000	1.000	1.000
62	1.000	1.000	1.000
63	1.000	1.000	1.000
64	1.000	1.000	1.000
65	1.000	1.000	1.000
66	1.000	1.000	1.000
67	1.000	1.000	1.000
68	1.000	1.000	1.000
69	1.000	1.000	1.000
70	1.000	1.000	1.000
71	1.000	1.000	1.000
72	1.000	1.000	1.000
73	1.000	1.000	1.000
74	1.000	1.000	1.000
75	1.000	1.000	1.000
76	1.000	1.000	1.000
77	1.000	1.000	1.000
78	1.000	1.000	1.000
79	1.000	1.000	1.000
80	1.000	1.000	1.000
81	1.000	1.000	1.000
82	1.000	1.000	1.000
83	1.000	1.000	1.000
84	1.000	1.000	1.000
85			

REFERENCE DATA

SREF	=	116.2600	SO.FT.	XMRP	=	1044.0000	IN.
LREF	=	146.0000	IN.	YMRP	=	.0000	IN.
BREF	=	146.0000	IN.	ZMRP	=	.0000	IN.
SCALE	=	.0055					

[illegible]

DEPENDENT VARIABLE CP

SECTION 115RB

THIRTA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	0.27	- 5351	- 5498	- 74.02	- 8553	.2564			
	0.50	- 5155	- 5073	- 8159	- 8716	.3063			
	0.74	- 4868	- 4739	- 8742	- 7971	.3693			
	0.98	- 4777	- 4705	- 1.0204	- 6909	.4312			
	1.11	- 4757	- 4897	- 1.3810	- 1.5651	.4580	- .5891	- .7121	- .4805
	1.39	- 4799	- 4978	- 1.4472	- 1.5515	.4713	.9042	.9999	- .6024
	1.68	- 5117	- 5608	.9632	- 1.4253	.5374	.9075	- .2542	- .6307
	1.91	- 5248	- 5831	- 1.7360	- 1.2204	.5478	.9233	- 1.2698	
	2.55	- 5821	.999. 9999	- 1.2396	- .3844	.9459	.9459		
	3.44	- 6468	- 7231	- 1.0875	- 1.5352	.5765	.9597	- .8335	
	3.92	.999. 9999	.999. 9999	- 1.7069	- .4107	.9568	.9568	- 1.5740	
	6.67	- 6028	- 6681	- 1.4108	- 1.5717	.9799	.9799	- .8445	
	7.02	- 6673	- 6417	- 1.1230	- 1.5955	.9933	.9933	- 1.4416	
	7.24	- 6266	- 6421	- 8627	- 1.4187	.8479	.999. 9999	- 1.2768	
	7.44	- 6495	.9999. 9999	- 7385	- 8113	.1041	.1041	- 1.2089	
	7.55	- 7071	.999. 9999	- 7541	- 1.2920	.1011	.1011		
	8.69	.999. 9999	.999. 9999	- 1.8228	- .4108	.0891	.0891	- 1.3504	
	9.02	- 7725	- 7260	- 1.6631	- 1.398	.9632	.9632	- .4252	
	9.23	- 7983	- 7361	- 7649	.0954	.9739	.9739		
	9.45	- 5863		- 1.5039		.10741	.10741		

DEPENDENT VARIABLE CP

SECTION 115RB

	0000	33	6000	46	0000	67	5000	89	0000	112	5000	135	0000	157	5000	180	0000	225	0000	270	0000	315	0000
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[illegible]

DATE 07 MAR 77

CORRELATED SOURCE DATA. MSFC TWT 603 (5A28F)

SAINT-PIERRE - 111 005 (2013) 203 411 005
(R11088)

PMV/L • 7.5000

MACH (4) = 1.952 ALPHA (1) = 110.000 Q1PSF = 10.960 P0 = 30.010 P

SECTION 115RB
BRS (1) NO11335

DEPENDENT VARIABLE CP

THE 1A .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

7/7

[illegible][illegible]

SECTION : 11SRB

DEPENDENT VARIABLE CP

SECTION 115500
115500.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
115500

7/1X

[illegible]

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA2BF)

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MSFC TWT 603 (SA2BF) SRB - ALL PROTUBERANCES

(R11089) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 315.000

MACH (1) = .599 ALPHA (1) = 130.100 O(PSF) = 7.5000 PO = 38.020 P = 29.820 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.1406	-.1400	-.1511	-.5031	.0429
.050	-.1738	-.1737	-.1758	-.5311	.0522
.074	-.2054	-.2069	-.2259	-.5337	.0543
.098	-.2359	-.2488	-.2695	-.5754	.0116
.111	-.2647	-.2608	-.2909	-.7406	-.2989
.139	-.2836	-.2851	-.3161	-.9488	-.2343
.168	-.3131	-.3209	-.3601	-.1.0191	-.3633
.191	-.3384	-.3447	-.3568	-.1.0433	-.3200
.255	.0000	.999.9999	-.8546	-.5633	.6156
.344	.0000	-.4434	-.9804	-.1.1287	.3460
.592	.0000	.999.9999	-.9218	-.3959	.6249
.667	.0000	.999.9999	-.1.5218	-.1.1086	.6596
.702	.0000	-.3878	-.5455	-.1.2445	.7720
.724	.0000	-.5858	-.6129	-.6920	-.1.147
.744	.0000	-.3646	-.4299	-.8086	-.1.0157
.755	.0000	.999.9999	-.4605	-.1.0463	-.1.1792
.869	.0000	.999.9999	-.1.5951	-.3697	.6530
.902	.999.9999	.999.9999	-.6956	-.8459	.4674
.923	-.5189	-.5497	-.1.0169	-.1.352	.6741
.945	-.5402	-.7273	-.1.0477	-.1.0839	.5013
.982	-.3542		-.8561		.9568

MACH (2) = .903 ALPHA (1) = 130.100 O(PSF) = 7.4000 PO = 22.010 P = 12.980 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.2515	-.2553	-.2617	-.4748	-.0760
.050	-.2690	-.2774	-.2939	-.5341	-.0399
.074	-.2907	-.3074	-.3306	-.4293	.023
.098	-.3189	-.3302	-.3932	-.4787	-.1723
.111	-.3423	-.3533	-.3888	-.5511	-.1.087
.139	-.3450	-.3594	-.3870	-.4573	-.5544
.168	-.3702	-.3882	-.4127	-.5153	-.3337
.191	-.3915	-.4140	-.4328	-.7704	-.6318
.255	-.4483	.999.9999	-.5889	-.1.074	.6435
					.6631

MSFC TWT 603 (5A28F) SRB - ALL PROTRUSANCES (R1 389)

MACH (2) = .903 ALPHA (1) = 130.100

SECTION C - 11SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

344	- .4796	- .4856	- .5369	- .8126	- .7329	.4652	.6749	- .5693
392	999	999	- .7600	- .8866		.6822	.6822	- .7026
.667		999		- .8866	- .0748	.7301	.7301	- .6376
.702	- .4931	- .4949	- .5720	- 1.0257	- .7352	.8733	.8733	- .6889
.724	- .5619	- .5323	- .5436	- .6011	- .8606	.0103	.0103	999
.744	- .5341	- .5606	- .6631	- .7584	- .5741	.7098	1.0010	.9999
.755	- .5599	999	- .6883	- .7475	- .6882	.5753	.8315	- .7896
.869	- .6903	999		- .8846		.0061	.7801	- .7254
.902	999	999	- 1.1001		- .8450	.2297	.2297	
.923	- .7040	- .6552	- .8208		.1912	.8252	.8252	- .7302
.945	- .6910	- .6269	- .7441		.1960	.6543	.6543	- .6388
.982	- .4004		- .5186			1.1031	1.1031	

[illegible]

SECTION 115RB

DEPENDENT VARIABLE CP

0000 22 5000 45 0000 57 5000 90 0000 112 5000 135 0000 157 5000 180 0000 225 0000 270 0000 315 0000

027	- 2901	- 2955	- 3052	- 3542	- 0694
050	- 3091	- 3091	- 3276	- 3054	- 1317
074	- 3279	- 3359	- 3442	- 2424	- 1569
098	- 3420	- 3491	- 3546	- 3751	- 0620
111	- 3507	- 3546	- 3594	- 3944	- 4390
139	- 3594	- 3649	- 3677	- 3348	- 7665
168	- 3780	- 3802	- 3819	- 3086	- 9999
191	- 3907	- 3944	- 3961	- 3042	- 8213
255	- 4202	- 4202	- 4202	- 2110	- 4516
344	- 4294	- 4198	- 4404	- 6436	- 8189
392	- 999	- 999	- 999	- 6545	- 8189
667	- 4236	- 4358	- 4656	- 8226	- 4514
724	- 5076	- 5108	- 5178	- 8842	- 4480
744	- 4602	- 4368	- 4752	- 9871	- 4451
755	- 4809	- 999	- 5297	- 8151	- 4981
869	- 5480	- 999	- 6039	- 2487	- 999
902	- 999	- 999	- 6716	- 2423	- 999
923	- 5941	- 5826	- 6495	- 4256	- 999
945	- 5847	- 6812	- 6665	- 9328	- 4466
982	- 1716	- 1716	- 10838	- 7911	- 5935
				- 3157	- 9405
				- 0327	- 3844
				- 4828	- 9975
				- 4594	- 8252
					- 3338
					- 12754

STABILIZED SOURCE DATA, MSFC TWT 603 (SA28F)

(R11089)

[illegible]

DEPENDENT VARIABLE: CP

[illegible]

7/11/88

X/L	027	-2238	-2266	-2311	-0262	.2512	
	050	-2301	-2297	-2345	.0069	.2948	
	074	-2302	-2302	-2406	.0217	.2890	
	098	-2414	-2435	-2432	-	.2281	
	111	-2446	-2485	-2495	.0397	.7257	.2421
	139	-2516	-2573	-2587	.1001	.8511	.034999
	168	-2608	-2651	-1786	.4840	.9630	.9999
	191	-2626	-2595	-1774	.0856	.8203	.6034
	255	-2731	999.9999	-1792	.0915	.8224	.9608
	344	-2638	-2643	-2616	.0924	.4716	.9574
	392	999.9999	999.9999	-1742		.8216	.9649
	667	-2524	-2482	-1816	.4713	.9600	.1740
	702	-2744	-2670	-2060		.1099	.1823
	724	-2356	-2364	-2715	.7920	.8617	.1837
	744	-2354	-2364	-0452	.2118	.2459	999.9999
	755	-2354	999.9999	-2596	.4187	.16772	.0251
	863	-2525	999.9999	-0965	.1401	.3528	.0751
	902	999.9999	999.9999	-2494	.5252	.1104	
	923	-2654	-2586	-1843	.1305	.3864	
	945	-2483	-2678	-2208	.5230	.10768	.1214
				-2240	.3350	.7257	.2666
				-2384		.5224	
				-1389			

NO.	DATE	DESCRIPTION	AMOUNT	BALANCE	PERCENT	REMARKS
1	1/1/72	INITIAL DEPOSIT	5,000.00	5,000.00	100.00	
2	1/15/72	INTEREST	12.50	5,012.50	100.25	
3	2/1/72	WITHDRAWAL	1,000.00	4,012.50	100.00	
4	2/15/72	INTEREST	10.03	4,022.53	100.00	
5	3/1/72	WITHDRAWAL	500.00	3,522.53	100.00	
6	3/15/72	INTEREST	8.81	3,531.34	100.00	
7	4/1/72	WITHDRAWAL	250.00	3,281.34	100.00	
8	4/15/72	INTEREST	8.20	3,289.54	100.00	
9	5/1/72	WITHDRAWAL	100.00	3,189.54	100.00	
10	5/15/72	INTEREST	7.97	3,197.51	100.00	
11	6/1/72	WITHDRAWAL	50.00	3,147.51	100.00	
12	6/15/72	INTEREST	7.87	3,155.38	100.00	
13	7/1/72	WITHDRAWAL	25.00	3,130.38	100.00	
14	7/15/72	INTEREST	7.58	3,137.96	100.00	
15	8/1/72	WITHDRAWAL	10.00	3,127.96	100.00	
16	8/15/72	INTEREST	7.32	3,135.28	100.00	
17	9/1/72	WITHDRAWAL	5.00	3,130.28	100.00	
18	9/15/72	INTEREST	7.05	3,137.33	100.00	
19	10/1/72	WITHDRAWAL	2.50	3,134.83	100.00	
20	10/15/72	INTEREST	6.78	3,141.61	100.00	
21	11/1/72	WITHDRAWAL	1.25	3,140.36	100.00	
22	11/15/72	INTEREST	6.52	3,146.88	100.00	
23	12/1/72	WITHDRAWAL	0.62	3,146.26	100.00	
24	12/15/72	INTEREST	6.26	3,152.52	100.00	
25	1/1/73	WITHDRAWAL	0.31	3,152.21	100.00	
26	1/15/73	INTEREST	6.00	3,158.21	100.00	
27	2/1/73	WITHDRAWAL	0.15	3,158.06	100.00	
28	2/15/73	INTEREST	5.74	3,163.80	100.00	
29	3/1/73	WITHDRAWAL	0.07	3,163.73	100.00	
30	3/15/73	INTEREST	5.48	3,169.21	100.00	
31	4/1/73	WITHDRAWAL	0.03	3,169.18	100.00	
32	4/15/73	INTEREST	5.22	3,174.40	100.00	
33	5/1/73	WITHDRAWAL	0.01	3,174.39	100.00	
34	5/15/73	INTEREST	4.96	3,179.35	100.00	
35	6/1/73	WITHDRAWAL	0.00	3,179.35	100.00	
36	6/15/73	INTEREST	4.70	3,184.05	100.00	
37	7/1/73	WITHDRAWAL	0.00	3,184.05	100.00	
38	7/15/73	INTEREST	4.44	3,188.49	100.00	
39	8/1/73	WITHDRAWAL	0.00	3,188.49	100.00	
40	8/15/73	INTEREST	4.18	3,192.67	100.00	
41	9/1/73	WITHDRAWAL	0.00	3,192.67	100.00	
42	9/15/73	INTEREST	3.92	3,196.59	100.00	
43	10/1/73	WITHDRAWAL	0.00	3,196.59	100.00	
44	10/15/73	INTEREST	3.66	3,200.25	100.00	
45	11/1/73	WITHDRAWAL	0.00	3,200.25	100.00	
46	11/15/73	INTEREST	3.40	3,203.65	100.00	
47	12/1/73	WITHDRAWAL	0.00	3,203.65	100.00	
48	12/15/73	INTEREST	3.14	3,206.79	100.00	
49	1/1/74	WITHDRAWAL	0.00	3,206.79	100.00	
50	1/15/74	INTEREST	2.88	3,209.67	100.00	
51	2/1/74	WITHDRAWAL	0.00	3,209.67	100.00	
52	2/15/74	INTEREST	2.62	3,212.29	100.00	

DEPENDENT VARIABLE CP

SECTION 115RB

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

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[illegible]

(R11089)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 130.120

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1293	999.9999	-.0516	.6346	1.2542
.902	999.9999	999.9999	-.0747	.2262	.4272
.923	-.1299	-.1238	-.0674	.4993	1.0517
.945	-.1177	-.1341	-.0977	.3197	.7141
.982	.2893		.1898		1.6139

-.0448
-.1013

MACH (6) = 3.480 ALPHA (1) = 130.120 Q1PSF = 6.8600 PO = 60.010 P = .81000 RN/L = 7.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0316	-.0418	-.0576	.1058	.3070
.050	-.0395	-.0458	-.0576	.1351	.3442
.074	-.0356	-.0508	-.0571	.1582	.3752
.098	-.0424	-.0542	-.0542	.1616	.3865
.111	-.0469	-.0554	-.0610	.2033	.8774
.139	-.0480	-.0537	-.0593	.2241	1.0679
.168	-.0525	-.0492	-.0576	.2219	1.0493
.191	-.0554	-.0458	-.0542	.2209	1.0550
.255	-.0576	999.9999	.0161	.5556	1.0476
.344	-.0610	-.0457	.0150	.8936	1.0471
.392	999.9999	999.9999	.0173	.8936	1.0448
.667	999.9999	999.9999	.0077	.5268	1.0516
.702	-.0603	-.0542	.0121	.6432	1.0155
.724	-.0689	-.0711	-.0514	.2337	.9605
.744	-.0683	-.0694	-.0554	1.7905	1.9266
.755	-.0694	999.9999	-.0621	1.1705	2.0966
.869	-.0728	999.9999	-.0131	.6576	1.5301
.902	999.9999	999.9999	-.0221	.2438	1.2675
.923	-.0723	-.0689	-.0187	.4806	.4555
.945	-.0672	-.0751	-.0407	.2951	1.0358
.982	.3194		.1852		.6886

999.9999
.1711
.1041

-.0035
-.0497

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11050) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 315.000

MACH (1) = .601 ALPHA (1) = 149.000 Q(PSF) = 7.5300 PO = 38.020 P = 29.780 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0006	.0046	.0009	-.1404	-.0202
.050	-.0383	-.0451	-.0474	-.2195	-.0684
.074	-.1005	-.1068	-.1109	-.2878	-.1311
.098	-.2059	-.1809	-.2595	-.4720	-.2853
.111	-.3599	-.2568	-.3632	-.8241	-.5773
.139	-.2150	-.1858	-.4422	-.6466	-.5939
.168	-.2193	-.2170	-.4837	-.0176	-.4347
.191	-.2301	-.2282	-.4978	-.0929	-.2480
.255	-.2447	999.9999	-.5562	-.2371	-.5220
.344	-.2779	-.2741	-.6426	-.1091	-.5287
.392	999.9999	999.9999	-.5716	-.2268	-.5695
.667	999.9999	999.9999	-.6205	-.1619	-.5083
.702	-.3729	-.1945	-.5632	-.3195	-.7682
.724	-.4907	-.4225	-.5058	-.5001	-.6803
.744	-.2195	-.1411	-.3192	-.3562	999.9999
.755	-.2851	999.9999	-.1419	-.5108	-.4280
.869	-.3090	999.9999	-.3921	-.2874	-.5783
.902	999.9999	999.9999	-.3261	-.3202	-.4554
.923	-.3897	-.4973	-.8072	-.1707	-.3202
.945	-.3513	-.5848	-.6909	-.4140	-.0245
.982	-.1198		-.6125	-.3198	-.2016
			-.6307	-.9142	-.8085
					-.8467

MACH (2) = .902 ALPHA (1) = 149.000 Q(PSF) = 7.3900 PO = 22.010 P = 12.990 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0322	-.0172	-.0071	-.0278	.0077
.050	-.1370	-.1357	-.1252	-.1434	-.0969
.074	-.2223	-.2346	-.3317	-.3519	-.2947
.098	-.3454	-.3149	-.5010	-.5084	-.7055
.111	-.4578	-.4377	-.4117	-.4813	-.0969
.139	-.2750	-.2815	-.2579	-.5301	-.5484
.168	-.2720	-.2872	-.2973	-.6248	-.1893
.191	-.2717	-.2872	-.2882	-.5997	-.0962
.255	-.2757	-.2930	-.2819	-.5206	-.2989
		999.9999	-.5795	-.1462	-.0920
			-.4936	-.2729	-.7067
				-.2069	-.4597
					-.2598

MSFC INT 603 (5A28F) SRB - ALL PROTRUDANCES

(R: 1090)

MACH (2) = .902 ALPHA (1) = 149.000

SECTION : 11SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 12.5000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-.3250	-.3325	999.9999	-.3808	-.7725	-.5707	.1450	.2676	-.6687
.344								.2712	-.5287
.392								.3330	-.7454
.667	999.9999	999.9999						.0839	
.702	-.4158	-.3705						-.4431	999.9999
.724	-.4251	-.4473		-.4212	-.5483	-.4290	.2052	-.5659	999.9999
.744	-.2157	-.2331		-.4875	-.6011	-.5802	-.6139	.8243	-.4117
.755	-.2621	999.9999		-.2182	-.3805	-.2764	.3526	.5299	-.6683
.869	-.4015	999.9999		-.2750	-.3705	-.4958		.3771	
.902	999.9999	999.9999			-.8660		-.0467	.1403	
.923	-.3736	-.4966		-.7203	-.7203		-.1617	-.2470	-.4732
.943	-.3751				-.5525		-.4254	-.5551	-.4455
.982	-.3751	-.4733			-.4843		-.6483	-.9765	
	-.1455				-.4627				

MACH (3) = 1.203 ALPHA (1) = 149.000 Q(PSF) = 9.1600 PO = 22.010 P = 9.0400 RN/L = 6.7000

SECTION () SRB

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

X/L	0.27	-1.988	-2097	-2015	-2003	-2274	-4531
	.050	-2765	-2865	-2684	-3033	-3459	-4448
	.074	-3691	-3624	-3636	-4454	-3666	-4513
	.098	-5105	-4648	-5151	-5788	-4357	-2955
	.111	-4160	-4615	-4750	-4814	1653	-3550
	.139	-3258	-3548	-3698	-4186	3359999.9999	-3299
	.168	-3144	-3547999.9999	-3412	-4155	2001	-4513
	.191	-3070	-3418	-3269	-4111	3020	-3143
	.255	-2594	999.9999	-4043	-3861	3133	
	.344	-2095	-2017	-2545	-0499	3279	
	.392	999.9999	999.9999	-3079	-3423	3227	
	.667	999.9999	999.9999	-5824	-0138	3282	-4858
	.702	-2600	-3620	-4868	-3570	3775	-3295
	.724	-5074	-4816	-4793	-1581	1273	-5198
	.744	-2281	-2924	-4243	-3997	3939	-4752
	.755	-3005999.9999	999.9999	-4493	-7558	8325	999.9999
	.869	-4707	999.9999	-3415	-0432	1.0088	-3284
	.902	999.9999	999.9999	-5317	-1177	7394	-4538
	.923	-4481	999.9999	-6400	1279	5113	
	.945	-4767	-4653	-5061	-2449	-0129	-6643
	.982	-0402	-4727	-5316	-0918	1745	-5861
				-1788	-3927	1975	
						1.1430	

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TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

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MSFC INT 603 (SA28F) SRB - ALL PROTUBERANCES (R11090)											
MACH (4) =	1.972	ALPHA (1) =	149.000	Q(PSF) =	10.910	P0 =	30.010	P =	4.0100	RN/L =	7.5000

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11090)

SECTION 11.035
BAS:1

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

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027	-1,584	-1,538	-1,546	-1,817	-1,0899	
050	-1,779	-1,745	-1,691	-1,881	-0,755	
074	-1,918	-1,895	-1,852	-1,637	-0,503	
098	-2,120	-2,053	-2,290	-1,720	-0,503	
111	-2,046	-2,056	-2,200	-0,926	3,039	-0,138
139	-1,913	-1,795	-1,858	-0,771	3,087	3,798999
168	-1,809	-1,827999	-1,887	-0,719	3,302	9,999
191	-1,847	-1,869	-1,845	-0,845	3,089	1,376
255	-1,826	999,9993	-2,015	1,239	3,885	2,008
344	-1,577	-1,666	-2,202	-0,632	3,840	-2,157
392	999,9999	999,9999	-1,855		3,952	-1,1956
667	-1,761	-2,146	-2,063	1,410	3,840	-1,1776
702	-2,871	-2,690	-2,398		4,340	-2,201
724	-1,746	-2,023	-2,575	-0,761	4,046	-2,524
755	-1,939999	9999	-2,430	-0,969	-1,158	999,9999
869	-2,304	999,9999	-1,320	-0,969	7,806	-0,436
902	999,9999	999,9999	-2,292	0,771	7,743	-1,1287
923	-2,515	2,665	-1,526	2,384	4,583	
945	-2,661	2,907	-2,287	-0,701	0,365	-1,816
982	1,743		-1,883	1,795	4,655	-2,297
			-2,910	-1,152	-0,348	
			0,097		1,1284	

MACH (5) = 2.740 ALPHA (1) = 149.000 Q(PSF) = 6.3700 P0 = 30.030 P = 1.2100 RN/L = 5.2000

SECTION () SRB

DEPEND

THEIA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
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027	-.0754	-.0856	-.0935	-.0813	-.0037		
050	-.0868	-.0923	-.0995	-.0674	.0132		
074	-.0843	-.1001	-.1062	-.0607	.0308		
098	-.0329	-.1062	-.1117	-.0558	.0381		
111	-.0935	-.1065	-.1177	-.0703	.3373	.4119	.0593
139	-.0977	-.1007	-.1074	.01014	.3567	.4204	.9999
168	-.0989	-.0965	.9999	.0789	.3694	.4240	.9999
191	-.1001	-.0923	-.0831	.0308	.2013	.2189	-.0941
255	-.1001	.9999	.9999	.0284	.3567	.4198	-.0947
344	-.0965	-.0874	-.0956	.2019	.3670	.4240	-.0947
392	.9999	.9999	-.0844	.0274	.4289	.4325	-.0941
667	.9999	.9999	-.0953	.2305	.4689	.0831	-.0965
702	-.1183	-.1061	-.0977	.0320	.4914		.9999
724	-.1384	-.1378	-.1287	-.0722	.3225	.0684	.9999
744	-.0947	-.0977	-.1147	.2353	.8257	.9477	.9320
755	-.1001	.9999	-.1074	.1352	.5624	.6953	-.0370

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11090)

MACH (5) = 2.740 ALPHA (1) = 149.000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869 -.1068 999.9999
.902 999.9999
.923 -.1189 999.9999
.945 -.1305
.982 .2559

-.0831 .2541
-.1329 .0254
-.0838 .2826
-.1196 .1140
.2402 1.1322

-.0395
-.0722

MACH (6) = 3.480 ALPHA (1) = 149.020 QIPSF1 = 6.6000 PQ = 60.020 P = .81000 RN/L = 7.1000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027 -.0303
.050 -.0399
.074 -.0365
.098 -.0427
.111 -.0494
.139 -.0494
.168 -.0539
.191 -.0556
.255 -.0556
.344 -.0545
.392
.667 999.9999
.702 -.0725
.724 -.0787
.744 -.0415
.755 -.0477
.869 -.0556
.902 999.9999
.923 -.0630
.945 -.0703
.982 .2932

-.0539
-.0568
-.0624
-.0652
-.0630
-.0590
-.0551
-.0562
-.0280
-.0308
-.0308
-.0421
-.0613
-.0545
-.0601
-.0585
-.0382
-.0731
-.0297
-.0652
.2903

-.0325
-.0246
-.0190
-.0100
.0643
.0733
.0728
.0700
.2329
.0705
.2430
.0683
-.0224
.2464
.1742
.2312
.0485
.2267
.0519

-.0294
.0474
.0587
.0604
.4234
.4437
.4493
.4459
.4493
.4640
.4566
.4651
.4955
.4952
.9349
.7706
.3901
.0348
.3574
.4477
.9870

.0874
999.9999
.2396
-.0370
-.0382
-.0399
-.0331
999.9999
.0576
.0074
-.0055
-.0218

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TABULATED SOURCE DATA. MSFC THT 603 (SA28F)

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MSFC THT 603 (SA28F) SRB - ALL PROUDERANCES (R11091) (22 AUG 75)

REFERENCE DATA

SREF = 115.2500 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 315.000

MACH (1) = .600 ALPHA (1) = 169.900 Q(PSF) = 7.5100 PO = 38.030 P = 29.810 RN/L = 8.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.1055	.1050	.1175	.1236	.1194						
.050	.0737	.0711	.0821	.0685	.0474						
.074	.0060	.0093	.0159	.0249	.0530						
.098	.1122	.1078	.1535	.2964	.3202						
.111	.3038	.3138	.4948	.7194	.7337	.7331	.7076	.5308	.3381		
.139	.1036	.0958	.1112	.1487	.1058	.0861	.999.9999	.1539	.1115		
.168	.0718	.0764	.0799.9999	.0792	.0392	.0079	.0494	.1163	.0716		
.191	.0644	.0651	.1050	.1223	.0226	.0039		.0957			
.255	.0942	.999.9999	.0978	.0605	.0179						
.344	.0594	.0557	.0970	.1225	.0139	.0139		.1084			
.392	.999.9999	.999.9999	.1415	.0416	.0103	.0138		.1208			
.667	.999.9999	.999.9999	.0267		.0913			.0138			
.702	.0611	.0434	.0305	.0637	.0193	.0367		.0994			
.724	.0664	.0734	.2277	.2413	.3754	.3972		.999.9999			
.744	.0392	.0296	.1586	.2081	.3697	.4404		.2950			
.755	.0223	.9999.9999	.0690	.0771	.2163	.2657		.1513			
.869	.3471	.999.9999	.3413	.0848	.0621						
.902	.999.9999	.999.9999	.5200	.3423	.2510						
.923	.4013	.4827	.5526	.4646	.4760			.5030			
.945	.3786	.4223	.5047	.6595	.7277			.4933			
.982	.4484		.5007		.5504						

MACH (2) = .905 ALPHA (1) = 169.900 Q(PSF) = 7.4200 PO = 22.010 P = 12.940 RN/L = 6.4000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	.0709	.0506	.0359	.0541	.0587						
.050	.0331	.0060	.0779	.0455	.0533						
.074	.0461	.0789	.2198	.2263	.2296						
.098	.1882	.2238	.3491	.3351	.3792						
.111	.3436	.4346	.3769	.3700	.2635	.2525	.3206	.3718	.3810		
.139	.1191	.0791	.1123	.1312	.0437	.0374	.999.9999	.1472	.1257		
.168	.0870	.0839	.0850	.0951	.0006	.0396	.1297	.1148	.0827		
.191	.0726	.0722	.0718	.1022	.0029	.2665		.0912			
.255	.0696	.999.9999	.1013	.0434	.0144						

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11081)

MACH (4) = 1.954 ALPHA (1) = 169.880 Q(PSF) = 11.010 PO = 30.000 P = 4.1200 RN/L = 7.6000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0189	-.0224	-.0505	-.0294	-.0298						
.050	-.0863	-.0886	-.1190	-.1305	-.2040						
.074	-.1707	-.1292	-.1663	-.2136	-.2178						
.098	-.2008	-.1493	-.2199	-.2337	-.2080						
.111	-.0154	-.0344	-.0548	-.0463	.0116	.0390	-.0393	-.0810	.0373		
.139	.0182	.0196	.0154	.0097	.0140	.0323	.999.9999	-.0397	.0007		
.168	.0091	.0108	.0099.9999	.0010	.0249	.0442	-.0252	-.0143	-.0087		
.191	-.0013	-.0017	-.0130	-.0337	.0133	.0376	-.0376	-.0705			
.255	-.0136	.999.9999	.0477	-.0154	.0442						
.344	.0014	-.0224	-.0758	-.0266	.0365	.0474		-.0379			
.392	.999.9999		.0013	-.0013		.0567		-.0157			
.667	.999.9999	.999.9999	-.1165	-.0256		.0051		-.1265			
.702	-.1370	-.0207	-.1100	-.0822	-.0404	.0012		-.1412			
.724	-.1980	-.1708	-.2091	-.2024	-.1901	-.1364		.999.9999			
.744	-.0260	.0045	.1258	.1920	.3346	.3922		.1434			
.755	-.0289	.999.9999	.0889	.0650	.1308	.1634		.0998			
.869	-.1447	.999.9999	-.0899	-.0182	.0400						
.902	.999.9999	.999.9999	-.1866	-.2009	-.1646						
.923	-.1894	-.2019	-.1707	-.0446	-.0488			-.1178			
.945	-.1908	-.2156	-.3009	-.2235	-.2222			-.2441			
.962	.0871		.0115		.1448						

MACH (5) = 2.740 ALPHA (1) = 169.900 Q(PSF) = 6.3700 PO = 30.020 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0530	-.0616	-.0725	-.0699	-.0736						
.050	-.0745	-.0635	-.0985	-.0967	-.1004						
.074	-.0784	-.0817	-.1049	-.1119	-.1149						
.098	-.0897	-.0835	-.1113	-.1228	-.1083						
.111	-.0264	-.0403	-.0526	-.0166	.0366	-.0440	-.0748	-.0373			
.139	-.0161	-.0126	-.0409	.0331	.0291	.0424	.999.9999	-.0609	-.0267		
.168	-.0187	-.0173	.999.9999	-.0247	.0299	.0435	.0145	-.0670	-.0287		
.191	-.0216	-.0222	-.0270	-.0379	.0263	.0135		-.0693			
.255	-.0185	.999.9999	-.0514	-.0020	.0437						
.344	-.0012	-.0255	-.0298	-.0191	.0253	.0429		-.0378			
.392	.999.9999		.0020	-.0099	.0392			-.0257			
.667	.999.9999	.999.9999	-.0608		.0398			-.0688			
.702	-.0518	-.0227	-.0645	-.0463	.0141	.0240		-.1016			
.724	-.0954	-.0870	-.0971	-.1058	-.0864	-.1034		.999.9999			
.744	.0040	.0034	.0805	-.0992	-.2572	.2931		.0732			
.755	.0034	.999.9999	.0489	.0265	.0750	.1036		.0210			

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11091)

MACH (5) = 2.740 ALPHA (1) = 169.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.0469	999.9999	-.0342	.0192	.0582						
.902	999.9999	999.9999	-.0931	-.0894	-.0697						
.923	-.0973	-.0808	-.0841	.0097	.0038					-.0463	
.945	-.1131	-.1186	-.1307	-.0810	-.0701					-.0998	
.982	.1698		.1242		.2481						

MACH (6) = 3.480 ALPHA (1) = 169.880 Q(PSF) = 5.8600 PO = 60.020 P = .81000 RN/L = 7.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0345	-.0441	-.0486	-.0464	-.0446						
.050	-.0463	-.0480	-.0599	-.0604	-.0599						
.074	-.0458	-.0520	-.0632	-.0649	-.0700						
.098	-.0514	-.0531	-.0661	-.0711	-.0627						
.111	-.0182	-.0210	-.0322	-.0311	-.0029						
.139	-.0125	-.0120	-.0215	-.0272	-.0042						
.168	-.0142	-.0148	-.0244	-.0289	.0037						
.191	-.0165	-.0154	-.0238	-.0232	.0318						
.255	-.0165	999.9999	-.0334	-.0037	.0426						
.344	-.0069	-.0170	-.0278	-.0187	.0280						
.392			-.0024	-.0103	.0415						
.667	999.9999	999.9999	-.0362	.0043	.0409						
.702	-.0182	-.0063	-.0446	-.0249	.0432						
.724	-.0520	-.0446	-.0559	-.0542	.0297						
.744	.0263	.0251	.0652	.0934	-.0435						
.755	.0240	999.9999	.0426	.0257	.0235						
.869	-.0125	999.9999	-.0035	.0375	.0912						
.902	999.9999	999.9999	-.0458	-.0407	.0697						
.923	-.0446	-.0368	-.0368	-.0375	-.0277						
.945	-.0689	-.0644	-.0706	-.0306	.0318						
.982	.2016		.1610		-.0170						
					.2805						

MSFC TWT 603 (SA28F) SRB - ALL PROTEBERANCES (R11092)

MACH (2) = .304 ALPHA (1) = 179.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.344	.0185	.0341	-.0780	-.0802	-.0748	-.0746	-.0736	-.0837
.392	.344	.0185	.0341	-.0780	-.0802	-.0748	-.0746	-.0736	-.0837
.667	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.702	.1683	.1643	.1433	.1433	.1294	.1169	.1063	.0931	.1025
.724	.0604	.0661	.0497	.0497	.0430	.0363	.0330	.0218	.0781
.744	.1120	.1125	.1094	.1094	.0996	.1008	.1058	.0775	.0492
.755	.0747999.9999	.0747999.9999	.0734	.0734	.0688	.0701	.0691	.0479	.0492
.869	.3390	.3390	.3423	.3423	.3423	.3032	.3032	.3510	.3510
.902	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.923	.4056	.4056	.4149	.4149	.4149	.4397	.4154	.4000	.4000
.945	.4039	.4039	.4133	.4133	.4133	.5114	.4015	.3914	.3914
.982	.6334	.6334	.6368	.6368	.6368	.6705	.6705	.6705	.6705

MACH (3) = 1.204 ALPHA (1) = 179.900 O(PSF) = 9.1600 P0 = 22.010 P = 9.0300 RN/L = 5.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.027	.0296	.0320	.0320	.0257	.0276	.0269	.0269	.0269
.050	.027	.0296	.0320	.0320	.0257	.0276	.0269	.0269	.0269
.074	.0396	.0396	.0555	.0555	.0880	.0621	.0487	.0487	.0487
.098	.3514	.3514	.3502	.3502	.2158	.2082	.1959	.1959	.1959
.111	.5410	.5410	.4380	.4380	.5521	.5407	.5388	.5388	.5388
.139	.1124	.1124	.1475	.1475	.1597	.1515	.2158	.2132	.1957
.168	.0072	.0072	.0083	.0083	.0282	.0353	.0620	.0711999.9999	.0424
.191	.0039	.0039	.0020999.9999	.0020999.9999	.0107	.0159	.0331	.0287	.0105
.255	.0216	.0216	.0034	.0034	.0216	.0244	.0306	.0306	.0214
.344	.0184	.0184	.0309	.0309	.0588	.0577	.0624	.0624	.1199
.392	.0429	.0429	.1653	.1653	.1060	.0713	.0429	.0429	.0563
.667	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.702	.0323	.0323	.0233	.0233	.0205	.0997	.0320	.0332	.0255
.724	.1883	.1883	.2138	.2138	.2166	.2144	.1944	.2006	.999.9999
.744	.3250	.3250	.2804	.2804	.2644	.2730	.2666	.2201	.1918
.755	.193999.9999	.193999.9999	.1901	.1901	.1879	.1904	.1806	.1385	.1450
.869	.1732	.1732	.2016	.2016	.1759	.1759	.2843	.2843	.1450
.902	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.923	.4932	.4932	.4381	.4381	.4204	.4204	.4172	.4172	.4704
.945	.6412	.6412	.6490	.6490	.5112	.5112	.4640	.4640	.4861
.982	.2410	.2410	.2361	.2361	.2361	.5914	.2548	.2548	.2548

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TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

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MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11092)

MACH (5) = 2.740 ALPHA (1) = 179.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.0050	999.9999	-.0093	-.0141	-.0208
.902	999.9999	999.9999	-.0919	-.0949	-.0852
.923	-.0779	-.0658	-.0785	-.0688	-.0766
.945	-.1149	-.1222	-.1137	-.1070	-.1149
.982	.1637		.1665	-.1740	-.1156

MACH (6) = 3.480 ALPHA (1) = 179.920 O(PSF) = 6.8600 PO = 60.020 P = .81000 RN/L = 7.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0058	-.0125	-.0114	-.0120	-.0103
.050	-.0238	-.0294	-.0339	-.0322	-.0328
.074	-.0272	-.0424	-.0463	-.0441	-.0463
.098	-.0328	-.0413	-.0543	-.0537	-.0571
.111	.0088	.0133	-.0041	-.0074	-.0091
.139	.0184	.0178	.0054	.0077	.0077
.168	.0161	.0144	.0043	.0049	.0065
.191	.0139	.0116	.0020	.0026	.0060
.255	.0054	999.9999	.0015	.0049	.0071
.344	-.0001	-.0080	.0003	.0015	.0065
.392	999.9999	999.9999	.0026	.0077	.0105
.667	999.9999	999.9999	-.0024	-.0046	.0122
.702	-.0053	.0032	-.0051	.0020	-.0001
.724	-.0559	-.0487	-.0446	-.0633	-.0069
.744	.1204	.1041	.0914	-.0559	999.9999
.755	.0601	999.9999	.0533	.1346	.1170
.863	.0144	999.9999	.0545	.0426	.0661
.902	999.9999	999.9999	.0127	.0071	.0824
.923	-.0356	-.0277	-.0492	-.0520	-.0384
.945	-.0576	-.0694	-.0334	-.0266	-.0334
.982	.1985		-.0565	-.0525	-.0565
			.2040	.2089	.2089